LAMPIRAN A

PENGOLAHAN DATA

CONTOH MENCARI KETEBALAN LAPISAN LAPUK
DENGAN METODE PERHITUNGAN "MULTI-LAYER"
PADA LINE 93WNJ-07

LINE 93WNJ-07

1. Untuk SP no. 1031 WZ dan Refraksi

Dari pembacaan data lapangan, kemudian dibuat T-X Curve, dan diperoleh :

Ti1 = 14,5 milli second = 0,0145 second

Ti2 = 16,0 milli second = 0,0160 second

Ti3 = 18,0 milli second = 0,0180 second

$$V1 = \frac{1\ m}{16\ milli\ sec} = \frac{1000\ m}{16\ sec} = 62,5\ \frac{m}{sec} = 63\ m/s$$

$$V2 = \frac{5\ m}{10\ milli\ sec} = \frac{5 \times 1000}{10}\ \frac{m}{sec} = 500\ m/s$$

$$V3 = \frac{9\ m}{9,3\ milli\ sec} = \frac{9 \times 1000}{9,3}\ \frac{m}{sec} = 967,74\ m/s$$

$$V4 = \frac{10\ m}{6\ milli\ sec} = \frac{10 \times 1000}{6}\ \frac{m}{sec} = 1666,66\ m/s$$

V4 = 1667 m/s

Ditentukan kedalaman "source" untuk survey WZ dan Refraksi adalah 2 meter, sehingga untuk : $T_{charge} = \frac{2\ m}{V1\ m/s}$

Jadi : $T_{charge} = \frac{2\ m}{63\ m/s} = 0,032\ s$

Perhitungan mencari Tw1, Tw2, Tw3 :

$$Tw1 = \frac{Ti1 + T\ charge}{2\sqrt{1-\left(\frac{V1}{V2}\right)^2}}$$

$$Tw1 = \frac{0,0145 + 0,032}{2\sqrt{1-\left(\frac{63}{500}\right)^2}} = \frac{0,0465}{1,984060483} = 0,023436786.. = 0,023\ s$$

$$Tw2 = \left\{\left(Ti2 + T\ charge\right) - \left(2.Tw1.\sqrt{1-\left(\frac{V1}{V3}\right)^2}\right)\right\} \frac{1}{2\sqrt{1-\left(\frac{V2}{V3}\right)^2}}$$

$$Tw2 = \{ (0,016+0,032) - (2.Tw1.\sqrt{1-\left(\frac{63}{968}\right)^2}) \} \frac{1}{2\sqrt{1-\left(\frac{500}{968}\right)^2}}$$

$$= (0,048 - 0,046774193) \times 0,583928143$$

$$= (0,001225807 \times 0,583928143) = 0,000715783 = 0,001 \text{ s}$$

$$Tw3 = \{ [Ti3 + T\ charge] - [(2.Twi.\sqrt{1-\left(\frac{V1}{V4}\right)^2}) + (2.Tw2.\sqrt{1-\left(\frac{V2}{V4}\right)^2})] \} \times \frac{1}{2\sqrt{1-\left(\frac{V3}{V4}\right)^2}}$$

$$Tw3 = \{ [0,018+0,032] - [(2.Tw1.\sqrt{1-\left(\frac{63}{1667}\right)^2}) + (2.Tw2.\sqrt{1-\left(\frac{500}{1667}\right)^2})] \} \times \frac{1}{2\sqrt{1-\left(\frac{968}{1667}\right)^2}}$$

$$Tw3 = \{ [0,05] - [(0,046840086 + 0,001365654)] \} \times 0,614153182$$

$$= [0,05 - 0,04820574] \times 0,614153182$$

$$= 0,00179426 \times 0,614153182$$

$$= 0,00110195 = 0,001 \text{ s}$$

Perhitungan Mencari Dw1, Dw2, Dw3 :

Dw1 = Tw1 x V1 = 0,023436786 x 63 = 1,476517488 = 1,47 m

Dw2 = Tw2 x V2 = 0,000715783 x 500 = 0,35789 m = 0,358 m

Dw3 = Tw3 x V3 = 0,00110195 x 968 = 1,0666876 m = 1,067 m

Mencari STw dan SDw :

STw = Tw1 + Tw2 + Tw3 = [0,023 + 0,001 + 0,001] s = 0,025 s

Jadi waktu weathering (Tw) = 0,025 s

SDw = Dw1 + Dw2 + Dw3 = (1,47 + 0,358 + 1,067) s = 2,895 s

Jadi ketebalan lapisan lapuk untuk line 93WNJ-07 pada SP1301 WZ dan SP1301 Ref adalah, Dw = 2,895 m

2. Untuk SP1081 WZ dan Ref

Dari pembacaan data lapangan, kemudian dibuat T-X Curve, dan diperoleh :

Ti1 = 24 milli second = 0,0240 s

Ti2 = 28 milli second = 0,0280 s

Ti3 = 30 milli second = 0,0300 s

$$V1 = \frac{0,5}{13,5} \frac{m}{\text{milli sec}} = \frac{0,5 \times 1000}{13,5} \frac{m}{s} = 37,037 \text{ m/s} = 37 \text{ m/s}$$

$$V2 = \frac{5 \text{ meter}}{12 \text{ milli sec}} = \frac{5 \times 1000}{12} \text{ m/s} = 416 \text{ m/s}$$

$$V3 = \frac{5 \text{ meter}}{5 \text{ milli sec}} = \frac{5 \times 1000}{5} = 1000 \text{ m/s}$$

$$V4 = \frac{10 \text{ meter}}{6,33 \text{ milli sec}} = \frac{10 \times 1000}{6,33} \text{ m/s} = 1579 \text{ m/s}$$

Untuk T charge $= \frac{2\ m}{V1} = \frac{2\ m}{37\ m/s} =$ 0,054 second

Perhitungan mencari Tw1 , Tw2 , Tw3 :

$$Tw1 = \frac{Ti1 + T \text{ charge}}{2\sqrt{1 - \left(\frac{V1}{V2}\right)^2}}$$

$$Tw1 = \frac{0,024 + 0,054}{2\sqrt{1-\left(\frac{37}{416}\right)^2}} = \frac{0,078}{1.992073559} = 0,039155181 = 0,039 \text{ s}$$

$$Tw2 = \left\{\left(Ti2 + T\ charge \right) - \left(2.Tw1.\sqrt{1-\left(\frac{V1}{V3}\right)^2} \right)\right\} \times \frac{1}{2\sqrt{1-\left(\frac{V2}{V3}\right)^2}}$$

$$Tw2 = \left\{\left(0,082 + 0,054 \right) - \left(2.Tw1.\sqrt{1-\left(\frac{37}{1000}\right)^2} \right)\right\} \times \frac{1}{2\sqrt{1-\left(\frac{416}{100}\right.}}$$

$$Tw2 = \left\{\left(0,082 \right) - \left(0,07825674\right)\right\} \times 0,549834459$$

$$= 0,00374326 \times 0,549834459$$

$$= 0,002058173 \text{ s}$$

$$= 0,002 \text{ s}$$

$$Tw3 = \left\{\left(Ti3 + T\ charge \right) - \left[\left(2.Tw1.\sqrt{1-\left(\frac{V1}{V4}\right)^2} \right) + \right.\right.$$

$$\left.\left. + \left(2.Tw2.\sqrt{1-\left(\frac{V2}{V4}\right)^2} \right)\right]\right\} \times \frac{1}{2\sqrt{1-\left(\frac{V3}{V4}\right)^2}}$$

$$Tw3 = \left\{\left(0,03 + 0,054 \right) - \left[\left(2.Tw1.\sqrt{1-\left(\frac{37}{1579}\right)^2} \right) + \right.\right.$$

$$\left.\left. + \left(2.Tw2.\sqrt{1-\left(\frac{416}{1579}\right)^2} \right)\right]\right\} \times \frac{1}{2\sqrt{1-\left(\frac{1000}{1579}\right)^2}}$$

$$Tw3 = \left\{\left(0,084 \right) - \left(0,07828886 + 0,003970919 \right)\right] \times 0,646081315$$

$$= \left(0,001740221 \times 0,646081315 \right)$$

$$= 0,001124324 \text{ s} = 0,001 \text{ s}$$

Perhitungan Mencari Dw1 , Dw2 , Dw3 :

Dw1 = Tw1 x V1

Dw1 = 0,039155181 x 37 = 1,448741697 = 1,450 m

Dw2 = Tw2 x V2

Dw2 = 0,002058173 x 416 = 0,856199968 = 0,856 m

Dw3 = Tw3 x V3

Dw3 = 0,001124324 x 1000 = 1.124324 = 1,124 m

Mencari STw dan SDw :

STw = Tw1 + Tw2 + Tw3

STw = 0,039 + 0,002 + 0,001 = 0,042 s

Jadi waktu weathering (Tw) = 0,042 second

SDw = Dw1 + Dw2 + Dw3

SDw = 1,450 + 0,856 + 1,124 = 3,430 m

Jadi ketebalan lapisan lapuk pada line 93WNJ-07 untuk SP1081 WZ dan Refraksi adalah , Dw = 3,430 m

3. Untuk SP no.1056 Refraksi

Dari pembacaan data lapangan , dibuat T-X Curve, kemudian diperoleh :

Ti1 = 17 milli second = 0,0170 s

$$V2 = \frac{10 \text{ meter}}{6 \text{ milli second}} = \frac{10 \times 1000}{6} \text{ m/s} = 1667 \text{ m/}$$

V1 , dicari dengan interpolasi, antara survey WZ dan Refraksi, yaitu pada SP1031 dengan SP1081 , sebagai berikut dibawah ini :

Dari SP1031 sampai SP1081 ada 50 titik SP .

Pada SP1031 didapat $Vw = \frac{SDw}{STw} = \frac{2,894...}{0,025...} = 115,156$ m/s

Pada SP1081 didapat $Vw = \frac{SDw}{STw} = \frac{3,430...}{0,042...} = 80,969$ m/s

Jadi selisih Vw pada SP1031 dengan Vw pada SP1081 :

(115,156 − 80,969) m/s = 34,187 m/s.

Sehingga increament tiap titik adalah :

$\frac{34,187}{49} = 0,697693878...$

Akhirnya dengan interpolasi tersebut tiap titik SP, harga Vn dapat diketahui (Vn = Vw) :

SP1031 = 115,156 m/s

SP1032 = 115,156 − (0,697693878...)

⋮

SP1044 = 115,156 − [13 x (0,697693878...)]

= 115,156 − (9,070020414...) = 106,267 m/s

Jadi Vw = 106,267 m/s dan V1 = 106 m/s

⋮

SP1056 = 115,156 − [25 x (0,697693878...)]

= 115,156 − (17,44234695...) = 98,062

Jadi Vw = 98,062 dan V1 = 98 m/s

⋮

SP1069 = 115,156 − [38 x (0,697693878...)]

= 115,156 − (26,51236736...) = 89,174 m/s

Jadi Vw = 89,174 dan V1 = 89 m/s

⋮

⋮

SP1094 , dicari juga dengan cara interpolasi antar SP WZ dan Refraksi . Yaitu antara SP1081 dengan SP1131

⋮

Begitu seterusnya untuk tiap-tiap nomor SP yang belum diketahui V1 , dicari dengan jalan interpolasi antar no.SP WZ & Refraksi dalam satu lintasan seismik (line).

Mencari Tw1 dan Dw1 pada SP1056 :

$$Tw1 = \frac{(\ 0{,}0170 + 0{,}032\ )}{2\sqrt{1-\left(\frac{98}{1667}\right)^2}} = \frac{0{,}049}{1{,}996540951} = 0{,}024542447 \text{ s}$$

Tw1 = 0,024 s

Jadi waktu weathering STw = Tw1 = 0,024 s

Dw1 = Tw1 x V1 = 0,024542447 x 98 = 2,40 m

Jadi ketebalan lapisan lapuk pada line 93WNJ-07 untuk SP1056 adalah Dw = SDw = Dw1 = 2,40 m

4. Untuk SP no.1044 Refraksi

Ti1 = 0,0180 s

T charge = 0,032 s (sesuai dengan hasil survey WZ & Ref pada SP1031)

V1 = 106 m/s (didapat dari interpolasi)

V2 = 1667 m/s

Maka,

$$Tw1 = \frac{(0{,}018 + 0{,}032)}{2\sqrt{1-\left(\frac{106}{1667}\right)^2}} = \frac{0{,}050}{1{,}995952562} = 0{,}025050696$$

Tw1 = 0,025 s

Dw1 = Tw1 x V1 = 0,025050696 x 106 = 2,65 m

Jadi waktu weathering Tw = Tw1 = 0,025 s

dan ketebalan lapisan lapuk pada line 93WNJ-07 untuk SP no.1044 adalah Dw = Dw1 = 2,65 m

5. Untuk SP no.1069 Refraksi

Ti1 = 0,0190 s

T charge = 0,032 s (sesuai pada hasil survey WZ & Ref pada SP no.1031)

V1 = 89 m/s (didapat dari interpolasi)

V2 = 1667 m/s

Maka,

$$Tw1 = \frac{(0,019 + 0,032)}{2\sqrt{1-\left(\frac{89}{1667}\right)^2}} = \frac{0,051}{1,997147546}$$

Tw1 = 0,025536421 s = 0,025 s

Jadi waktu weathering Tw = 0,025 s

Dw1 = Tw1 x V1 = 0,025536421 x 89 = 2,27 m

Jadi ketebalan laisan lapuk Dw = 2,27 m

Jadi untuk survey refraksi saja , yang diketahui hanya V1 dan V2. Dan hanya ada satu Time Intercept (Ti1), sehingga hanya Tw1 dan Dw1 saja yang dapat dicari . Untuk lebih jelasnya dapat dilihat pada rumus perhitungan Multi-Layer.

Begitu seterusnya untuk tiap-tiap no.SP , cara mencari ketebalan lapisan lapuk dalam masing-masing lintasan, sama seperti di atas (line 93WNJ-07, dari nomer 1-5).

LAMPIRAN B

HASIL PENGOLAHAN DATA

1. LINE 93WNJ-01
2. LINE 93WNJ-03
3. LINE 93WNJ-05
4. LINE 93WNJ-07
5. LINE 93WNJ-09
6. LINE 93WNJ-11
7. LINE 93WNJ-13
8. LINE 93WNJ-15
9. LINE 93WNJ-57
10. LINE 93WNJ-59

(MULTI-LAYER)

LINE : 93WXT- 01

SP.no	Vw	V1	V2	V3	V4	Vsw	Tcharge	S1(s)	S2(s)	S3(s)	Sw1(s)	Sw2(s)	Sw3(s)	Sw1(m)	Sw2(m)	Sw3(m)	SSw(s)	SSw(m)
1371	198.889																	
1370	198.889	50	166	1000	1667	1690	0.040	0.0075	0.0110	0.0185	0.025	0.001	0.005	1.245	0.105	4.655	0.030	6.005
1358	219.862	220	1714			1690	0.040	0.0190			0.030			6.560			0.030	6.560
1345	242.583	243	1667			1667	0.040	0.0270			0.034			9.224			0.034	9.224
1333	263.556	264	1667			1667	0.040	0.0225			0.032			8.341			0.032	8.341
1320	286.276	50	526	1154	1667	1667	0.040	0.0145	0.0165	0.0270	0.027	0.001	0.007	1.369	0.533	8.279	0.036	10.180
1308	272.576	273	1667			1667	0.040	0.0195			0.030			8.220			0.030	8.220
1295	257.733	258	1667			1667	0.040	0.0310			0.035			9.261			0.035	9.261
1283	244.033	244	1667			1667	0.040	0.0260			0.028			6.907			0.028	6.907
1270	229.191	50	536	1200	1667	1667	0.040	0.0120	0.0160	0.0220	0.026	0.002	0.004	1.386	1.144	4.975	0.032	7.424
1258	193.815	194	1667			1667	0.040	0.0225			0.031			6.098			0.031	6.098
1245	155.491	155	1714			1690	0.040	0.0295			0.035			5.426			0.035	5.426
1233	120.114	120	1667			1690	0.040	0.0200			0.030			3.613			0.030	3.613
1220	81.790	47	357	667	1667	1667	0.043	0.0170	0.0185	0.0215	0.030	0.001	0.001	1.412	0.238	0.982	0.032	2.632
1208	101.172	101	1667			1667	0.043	0.0125			0.028			2.790			0.028	2.790
1197	118.938	119	1667			1667	0.043	0.0320			0.037			4.445			0.037	4.445
1185	138.319	138	1667			1667	0.043	0.0170			0.030			4.133			0.030	4.133
1168	165.776	50	370	667	1667	1667	0.040	0.0170	0.0185	0.0305	0.029	0.001	0.006	1.438	0.252	4.246	0.036	5.937
1156	185.602	186	1667			1667	0.040	0.0140			0.027			5.043			0.027	5.043
1143	207.081	207	1667			1714	0.040	0.0305			0.036			7.357			0.035	7.357
1131	226.907	227	1765			1714	0.040	0.0215			0.031			7.036			0.031	7.036
1120	245.081	50	500	1200	1667	1667	0.040	0.0160	0.0195	0.0270	0.028	0.002	0.005	1.407	0.898	6.323	0.035	8.629
1108	244.601	245	1667			1667	0.040	0.0200			0.030			7.418			0.030	7.418
1095	244.080	244	1667			1667	0.040	0.0295			0.035			8.574			0.035	8.574
1083	243.599	244	1667			1667	0.040	0.0215			0.031			7.572			0.031	7.572
1071	243.119	50	455	833	1667	1667	0.040	0.0110	0.0140	0.0280	0.026	0.002	0.008	1.283	0.756	6.500	0.035	8.538
1059	243.424	243	1667			1667	0.040	0.0230			0.032			7.751			0.032	7.751
1047	243.728	244	1667			1667	0.040	0.0275			0.034			8.315			0.034	8.315
1035	244.033	244	1667			1667	0.040	0.0255			0.033			8.079			0.033	8.079

MULTI-LAYER

LINE : 93WN3- 03

SP.NO	Pw	W1	W2	W3	W4	Wsw	Discharge	I1	I2(s)	I3(s)	Dw1(s)	Dw2(s)	Dw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	SDw(s)	SDw(m)
1375	255.643																	
1374	255.643	46	555	1071	1579	1622	0.042	0.013	0.015	0.025	0.027	0.001	0.007	1.317	0.493	7.173	0.035	8.925
1362	237.144	237	1967			1622	0.042	0.014			0.028			6.668			0.028	6.668
1349	217.103	217	1622			1622	0.042	0.014			0.028			6.043			0.028	6.043
1337	198.605	199	1622			1622	0.042	0.015			0.028			5.629			0.028	5.629
1324	178.564	50	526	1071	1667	1622	0.040	0.015	0.015	0.021	0.027	0.000	0.004	1.369	0.094	4.149	0.031	5.612
1312	160.178	160	1579			1622	0.040	0.014			0.027			4.347			0.027	4.347
1299	140.259	140	1579			1622	0.040	0.020			0.030			4.224			0.030	4.224
1287	121.873	122	1667			1622	0.040	0.023			0.032			3.849			0.032	3.849
1274	101.955	48	645	1000	1579	1579	0.042	0.014	0.018	0.019	0.028	0.003	0.000	1.340	1.650	0.130	0.031	3.120
1262	107.723	108	1579			1579	0.042	0.015			0.028			3.059			0.028	3.059
1249	113.971	114	1622			1622	0.042	0.021			0.031			3.551			0.031	3.551
1237	119.739	120	1622			1622	0.042	0.022			0.032			3.792			0.032	3.792
1224	125.988	51	588	1034	1667	1667	0.039	0.019	0.020	0.023	0.029	0.001	0.002	1.477	0.305	2.201	0.032	3.983
1212	163.817	164	1667			1667	0.039	0.015			0.027			4.462			0.027	4.462
1199	204.798	205	1579			1622	0.039	0.022			0.031			6.270			0.031	6.270
1187	242.626	243	1667			1622	0.039	0.016			0.028			6.709			0.028	6.709
1174	283.608	54	606	1153	1579	1622	0.037	0.0135	0.0145	0.024	0.025	0.001	0.007	1.370	0.304	7.511	0.032	9.185
1162	243.548	244	1667			1622	0.037	0.012			0.025			5.975			0.025	5.975
1154	216.841	217	1622			1622	0.037	0.021			0.029			6.295			0.029	6.295
1142	176.781	177	1622			1622	0.037	0.014			0.026			4.538			0.026	4.538
1124	116.691	48	571	1111	1579	1622	0.042	0.017	0.018	0.021	0.029	0.001	0.002	1.401	0.449	1.841	0.032	3.691
1112	114.196	114	1667			1622	0.042	0.019			0.030			3.472			0.030	3.472
1099	111.493	111	1714			1690	0.042	0.032			0.037			4.115			0.037	4.115
1087	108.939	109	1667			1690	0.042	0.019			0.030			3.313			0.030	3.313
1074	106.296	52	625	1034	1667	1622	0.038	0.018	0.019	0.021	0.028	0.000	0.002	1.473	0.147	1.578	0.030	3.199
1062	146.729	147	1579			1622	0.038	0.018			0.028			4.123			0.028	4.123

(MULTI-LAYER)

LINE : 93KRJ- 05

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)	I
1001	144.795	50	666	1111	1579	1579	0.040	0.019	0.021	0.025	0.030	0.001	0.002	1.479	0.788	2.516	0.033	4.783	
1014	152.351	152	1579			1579	0.040	0.013			0.027			4.056			0.027	4.056	
1026	159.326	159	1500			1538	0.040	0.016			0.028			4.486			0.028	4.486	
1039	166.882	167	1579			1538	0.040	0.012			0.026			4.321			0.026	4.321	
1051	173.856	50	526	1034	1667	1667	0.040	0.011	0.014	0.019	0.025	0.002	0.003	1.268	0.864	3.081	0.030	5.214	
1064	160.402	160	1667			1667	0.040	0.016			0.028			4.472			0.028	4.472	
1074	150.052	150	1579			1579	0.040	0.012			0.026			3.881			0.026	3.881	
1087	136.557	137	1579			1579	0.040	0.016			0.028			3.805			0.028	3.805	
1103	120.037	46	588	1111	1667	1667	0.043	0.020	0.023	0.026	0.032	0.002	0.001	1.453	1.164	1.583	0.035	4.200	
1116	129.243	129	1667			1667	0.043	0.026			0.035			4.471			0.035	4.471	
1126	136.325	136	1579			1579	0.043	0.021			0.032			4.377			0.032	4.377	
1139	145.531	146	1579			1579	0.043	0.022			0.033			4.748			0.033	4.748	
1145	149.780	45	588	1000	1667	1667	0.044	0.021	0.024	0.030	0.033	0.002	0.003	1.477	1.045	3.129	0.038	5.650	
1158	155.674	156	1667			1667	0.044	0.017			0.031			4.765			0.031	4.765	
1174	162.929	163	1667			1622	0.044	0.014			0.029			4.784			0.029	4.784	
1187	168.823	169	1579			1622	0.044	0.012			0.028			4.750			0.028	4.750	
1203	176.078	44	588	1000	1667	1667	0.045	0.018	0.020	0.027	0.032	0.001	0.004	1.389	0.685	4.478	0.037	6.552	
1216	174.950	175	1667			1667	0.045	0.014			0.030			5.230			0.030	5.230	
1226	174.083	174	1579			1579	0.045	0.023			0.034			5.951			0.034	5.951	
1239	172.956	173	1579			1579	0.045	0.016			0.031			5.347			0.031	5.347	
1245	172.435	47	666	1052	1579	1622	0.043	0.020	0.022	0.028	0.031	0.001	0.004	1.474	0.820	3.977	0.036	6.271	
1258	205.522	206	1667			1622	0.043	0.016			0.030			6.063			0.030	6.063	
1274	246.244	246	1667			1667	0.043	0.022			0.033			8.036			0.033	8.036	
1287	279.331	279	1667			1667	0.043	0.022			0.033			9.145			0.033	9.145	
1301	314.962	46	625	1111	1579	1622	0.043	0.020	0.022	0.037	0.032	0.001	0.010	1.464	0.522	11.585	0.043	13.571	
1314	314.962	315	1667			1622	0.043	0.017			0.031			9.699			0.031	9.699	

(MULTI-LAYER)

LINE : 93NNJ- 07

SP.NO	Vw	V1	V2	V3	V4	Vsv	Icharge	S1	S2(s)	S3(s)	Sw1(s)	Sw2(s)	Sw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	SSw(s)	SDw(m)
1031	115.156	63	500	966	1667	1667	0.032	0.0145	0.0160	0.0180	0.023	0.001	0.001	1.466	0.338	1.067	0.025	2.894
1044	106.267	106	1667			1667	0.032	0.0180			0.025			2.649			0.025	2.649
1056	98.062	98	1667			1667	0.032	0.0170			0.024			2.394			0.024	2.394
1069	89.174	89	1667			1667	0.032	0.0190			0.025			2.266			0.025	2.266
1081	80.969	37	416	1000	1579	1622	0.054	0.0240	0.0280	0.0300	0.039	0.002	0.001	1.450	0.656	1.124	0.042	3.430
1094	68.757	69	1667			1622	0.054	0.0275			0.041			3.624			0.041	3.624
1106	95.945	96	1579			1622	0.054	0.0160			0.035			3.367			0.035	3.367
1119	103.783	104	1667			1622	0.054	0.0125			0.033			3.459			0.033	3.459
1131	110.921	55	250	1111	1667	1667	0.036	0.0125	0.0150	0.0170	0.025	0.001	0.001	1.377	0.171	1.450	0.027	2.999
1144	108.764	109	1667			1667	0.036	0.0125			0.024			2.663			0.024	2.663
1156	106.773	107	1667			1622	0.036	0.0205			0.028			3.042			0.028	3.042
1169	104.616	105	15[illegible]			1622	0.036	0.0145			0.025			2.666			0.025	2.666
1181	102.625	50	625	1134	1667	1622	0.040	0.0130	0.0145	0.0160	0.027	0.001	0.001	1.329	0.513	1.065	0.028	2.907
1194	106.494	106	1579			1622	0.040	0.0115			0.026			2.748			0.026	2.748
1206	110.660	111	1667			1667	0.040	0.0160			0.028			3.105			0.028	3.105
1220	114.529	115	1667			1667	0.040	0.0155			0.028			3.186			0.028	3.186
1231	117.505	50	566	1111	1667	1667	0.040	0.0125	0.0150	0.0170	0.026	0.001	0.001	1.318	0.772	1.305	0.029	3.395
1244	114.627	115	1667			1667	0.040	0.0175			0.029			3.303			0.029	3.303
1256	111.970	112	1667			1667	0.040	0.0255			0.033			3.675			0.033	3.675
1269	109.092	109	1667			1667	0.040	0.0175			0.029			3.143			0.029	3.143
1281	106.435	50	416	909	1667	1667	0.040	0.0150	0.0165	0.0195	0.028	0.001	0.002	1.385	0.277	1.338	0.030	3.199
1294	119.049	119	1667			1667	0.040	0.0130			0.027			3.163			0.027	3.163
1306	130.692	131	1667			1667	0.040	0.0145			0.027			3.572			0.027	3.572
1319	143.366	143	1667			1667	0.040	0.0180			0.029			4.171			0.029	4.171
1331	154.949	50	416	1000	1667	1667	0.040	0.0130	0.0150	0.0200	0.027	0.001	0.003	1.335	0.384	3.030	0.031	4.749
1344	154.949	155	1667			1667	0.040	0.0130			0.027			4.124			0.027	4.124

MULTI-LAYER

LINE : 93WKJ- 09

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	163.005	50	357	833	1667	1667	0.040	0.009	0.016	0.022	0.025	0.004	0.003	1.237	1.304	2.595	0.032	5.137
1014	152.623	153	1667			1667	0.040	0.018			0.029			4.406			0.029	4.406
1026	143.039	143	1667			1667	0.040	0.021			0.031			4.379			0.031	4.379
1039	132.657	133	1667			1667	0.040	0.022			0.031			4.092			0.031	4.092
1051	123.073	50	312	810	1667	1667	0.040	0.015	0.020	0.024	0.028	0.002	0.002	1.393	0.657	1.932	0.032	3.981
1064	141.221	141	1667			1667	0.040	0.021			0.031			4.323			0.031	4.323
1076	157.973	158	1667			1667	0.040	0.031			0.035			5.594			0.035	5.594
1089	176.121	176	1667			1667	0.040	0.014			0.027			4.782			0.027	4.782
1101	192.873	40	384	1000	1667	1667	0.050	0.015	0.022	0.031	0.033	0.003	0.005	1.307	1.289	5.395	0.041	7.990
1114	233.456	233	1667			1667	0.050	0.016			0.033			7.781			0.033	7.781
1126	270.916	271	1667			1667	0.050	0.024			0.037			10.090			0.037	10.090
1139	311.499	311	1667			1667	0.050	0.025			0.038			11.891			0.038	11.891
1151	348.960	66	333	1034	1579	1622	0.030	0.010	0.013	0.026	0.021	0.001	0.009	1.257	0.399	8.810	0.030	10.566
1164	295.213	295	1667			1622	0.030	0.024			0.027			8.069			0.027	8.069
1176	245.600	246	1667			1667	0.030	0.022			0.026			6.494			0.026	6.494
1189	191.853	192	1667			1667	0.030	0.022			0.026			5.003			0.026	5.003
1201	142.240	50	434	1000	1667	1667	0.040	0.016	0.020	0.024	0.028	0.002	0.002	1.397	0.891	2.306	0.032	4.594
1214	141.441	141	1667			1667	0.040	0.021			0.030			4.294			0.030	4.294
1224	140.826	141	1667			1667	0.040	0.025			0.033			4.593			0.033	4.593
1237	140.027	140	1667			1667	0.040	0.020			0.030			4.181			0.030	4.181
1251	139.166	40	500	1111	1667	1667	0.050	0.023	0.025	0.030	0.036	0.001	0.003	1.455	0.648	3.588	0.041	5.691
1264	138.288	138	1667			1667	0.050	0.017			0.034			4.649			0.034	4.649
1276	137.478	137	1667			1667	0.050	0.031			0.040			5.552			0.040	5.552
1289	136.600	137	1667			1667	0.050	0.017			0.034			4.592			0.034	4.592
1301	135.789	50	455	1000	1667	1667	0.040	0.015	0.019	0.023	0.028	0.002	0.002	1.383	0.954	1.972	0.032	4.309
1314	135.789	136	1667			1667	0.040	0.021			0.031			4.155			0.031	4.155

(MULTI-LAYER)

LINE : 93WSJ- 11

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	131.119	66	625	938	1667	1715	0.030	0.019	0.024	0.025	0.025	0.003	0.000	1.636	1.821	0.204	0.028	3.661
1014	122.158	122	1765			1715	0.030	0.024			0.027			3.325			0.027	3.325
1026	113.886	114	1579			1600	0.030	0.016			0.023			2.644			0.023	2.644
1039	104.925	105	1622			1600	0.030	0.015			0.023			2.382			0.023	2.382
1051	96.654	50	454	1000	1667	1667	0.040	0.020	0.024	0.025	0.030	0.002	0.001	1.497	0.945	0.722	0.033	3.164
1064	109.593	110	1667			1667	0.040	0.016			0.028			3.048			0.028	3.048
1076	121.537	122	1579			1622	0.040	0.023			0.031			3.809			0.031	3.809
1089	134.476	134	1667			1622	0.040	0.017			0.028			3.811			0.028	3.811
1101	146.420	50	410	1071	1667	1622	0.040	0.015	0.021	0.024	0.028	0.003	0.002	1.385	1.142	2.244	0.033	4.771
1126	124.034	124	1579			1600	0.040	0.016			0.028			3.484			0.028	3.484
1139	112.394	112	1622			1600	0.040	0.012			0.026			2.929			0.026	2.929
1151	101.649	50	250	555	1667	1667	0.040	0.013	0.016	0.022	0.027	0.001	0.003	1.352	0.298	1.494	0.031	3.144
1164	124.162	124	1667			1667	0.040	0.013			0.027			3.299			0.027	3.299
1176	144.943	145	1667			1622	0.040	0.024			0.032			4.656			0.032	4.656
1189	167.455	167	1579			1622	0.040	0.022			0.031			5.178			0.031	5.178
1199	184.773	50	625	1153	1579	1622	0.040	0.019	0.022	0.027	0.030	0.001	0.003	1.480	0.880	4.012	0.034	6.371
1212	217.549	218	1667			1622	0.040	0.023			0.032			6.912			0.032	6.912
1220	237.718	238	1714			1667	0.040	0.026			0.033			7.861			0.033	7.861
1233	270.494	270	1622			1667	0.040	0.021			0.031			8.367			0.031	8.367
1250	313.355	66	357	1111	1667	1667	0.030	0.010	0.013	0.022	0.021	0.001	0.006	1.353	0.352	7.005	0.028	8.710
1263	286.553	287	1667			1667	0.030	0.021			0.026			7.462			0.026	7.462
1275	261.812	262	1714			1690	0.030	0.029			0.030			7.789			0.030	7.789
1288	235.009	235	1667			1690	0.030	0.018			0.024			5.733			0.024	5.733
1307	195.836	63	417	909	1667	1667	0.032	0.013	0.016	0.023	0.023	0.002	0.004	1.407	0.727	3.333	0.028	5.467
1320	195.836	196	1667			1667	0.032	0.019			0.025			4.979			0.025	4.979
1331	195.836	196	1667			1667	0.032	0.031			0.031			6.163			0.031	6.163
1344	195.836	196	1667			1667	0.032	0.019			0.025							

(MULTI-LAYER)

LINE : SIWAJ- 13

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	81.222	43	555	1000	1667	1667	0.047	0.022	0.023	0.025	0.034	0.001	0.001	1.467	0.286	1.153	0.036	2.906
1014	75.686	79	1667			1667	0.047	0.012			0.029			2.285			0.029	2.285
1026	76.344	76	1667			1667	0.047	0.025			0.036			2.733			0.036	2.733
1039	73.807	74	1667			1667	0.047	0.018			0.032			2.365			0.032	2.365
1051	71.466	50	666	1111	1579	1622	0.040	0.015	0.016	0.017	0.023	0.001	0.000	1.379	0.375	0.275	0.028	2.029
1064	74.352	74	1667			1622	0.040	0.014			0.027			2.010			0.027	2.010
1076	77.016	77	1579			1600	0.040	0.015			0.027			2.101			0.027	2.101
1089	79.902	80	1622			1500	0.040	0.018			0.029			2.320			0.029	2.320
1101	82.566	41	714	1000	1667	1667	0.049	0.018	0.021	0.022	0.033	0.002	0.000	1.371	1.502	0.067	0.036	2.941
1114	87.753	88	1667			1667	0.049	0.007			0.028			2.429			0.028	2.429
1126	92.540	93	1667			1667	0.049	0.016			0.032			3.002			0.032	3.002
1139	97.727	98	1667			1667	0.049	0.016			0.032			3.171			0.032	3.171
1151	102.514	47	625	1176	1667	1667	0.043	0.015	0.015	0.017	0.029	0.000	0.001	1.345	0.142	1.610	0.030	3.096
1164	101.403	101	1667			1667	0.043	0.003			0.023			2.314			0.023	2.314
1176	100.387	100	1667			1667	0.043	0.022			0.032			3.221			0.032	3.221
1189	99.280	99	1667			1667	0.043	0.016			0.029			2.887			0.029	2.887
1201	98.259	50	625	1000	1579	1622	0.040	0.014	0.016	0.017	0.027	0.001	0.001	1.342	0.759	0.727	0.029	2.828
1214	99.975	100	1667			1622	0.040	0.017			0.028			2.829			0.028	2.829
1226	101.559	102	1667			1644	0.040	0.021			0.030			3.078			0.030	3.078
1239	103.274	103	1622			1644	0.040	0.014			0.027			2.794			0.027	2.794
1251	104.858	50	689	1000	1579	1622	0.040	0.013	0.017	0.018	0.027	0.002	0.000	1.329	1.629	0.086	0.029	3.043
1264	108.100	108	1667			1622	0.040	0.016			0.028			3.006			0.028	3.006
1280	112.090	112	1579			1579	0.040	0.016			0.028			3.118			0.028	3.118
1293	115.332	115	1579			1579	0.040	0.013			0.026			3.036			0.026	3.036
1301	117.327	48	588	1111	1579	1622	0.042	0.018	0.023	0.024	0.030	0.003	0.001	1.425	1.693	0.794	0.033	3.902
1314	123.449	123	1667			1622	0.042	0.005			0.023			2.857				

MULTI-LAYER

LINE : 93 WN3-15

SP.NO	Vw	Y1	Y2	Y3	Y4	Vsw	Dcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	249.56	40	576	1000	1666	1666	0.050	0.013	0.019	0.032	0.032	0.004	0.007	1.263	2.078	7.249	0.042	10.590
1014	261.12	251	1666			1666	0.050	0.026			0.038			9.981			0.038	9.981
1026	271.78	272	1667			1715	0.050	0.033			0.042			11.432			0.042	11.432
1039	283.34	283	1765			1715	0.050	0.026			0.038			10.308			0.038	10.308
1051	294.00	50	500	909	1765	1765	0.040	0.012	0.019	0.036	0.026	0.004	0.009	1.307	2.041	8.182	0.039	11.529
1064	315.64	316	1765			1765	0.040	0.030			0.035			11.148			0.035	11.148
1076	335.61	336	1667			1715	0.040	0.038			0.040			13.277			0.040	13.277
1089	357.24	357	1765			1715	0.040	0.008			0.024			8.664			0.024	8.664
1101	377.21	40	526	1071	1765	1765	0.050	0.009	0.013	0.036	0.030	0.002	0.014	1.183	1.168	14.891	0.046	17.243
1114	383.05	383	1765			1765	0.050	0.025			0.038			14.715			0.038	14.715
1126	388.44	388	1667			1715	0.050	0.035			0.043			16.877			0.043	16.877
1139	394.28	394	1765			1715	0.050	0.028			0.040			15.675			0.040	15.675
1151	399.68	40	556	1034	1666	1666	0.050	0.006	0.015	0.039	0.028	0.005	0.015	1.123	2.933	15.115	0.048	19.171
1164	335.86	336	1666			1666	0.050	0.028			0.040			13.373			0.040	13.373
1176	276.96	277	1666			1666	0.050	0.025			0.038			10.533			0.038	10.533
1189	213.14	213	1666			1666	0.050	0.025			0.038			8.059			0.038	8.059
1201	154.23	40	500	1000	1765	1765	0.050	0.017	0.019	0.026	0.034	0.001	0.004	1.344	0.531	4.106	0.039	5.981
1214	160.96	161	1765			1765	0.050	0.024			0.037			5.981			0.037	5.981
1226	167.17	167	1667			1715	0.050	0.020			0.035			5.881			0.035	5.881
1239	173.90	174	1765			1715	0.050	0.021			0.035			6.160			0.035	6.160
1251	180.11	40	455	909	1765	1765	0.050	0.016	0.018	0.029	0.033	0.001	0.006	1.325	0.475	5.431	0.040	7.231
1264	185.85	186	1765			1765	0.050	0.026			0.038			7.055			0.038	7.055
1276	191.14	191	1667			1667	0.050	0.022			0.036			6.879			0.036	6.879
1289	196.88	197	1667			1667	0.050	0.026			0.038			7.534			0.038	7.534
1301	202.17	50	476	1000	1765	1715	0.040	0.016	0.018	0.027	0.028	0.001	0.005	1.408	0.476	5.027	0.034	6.911
1314	168.52	169	1667			1715	0.040	0.014			0.027			4.574			0.027	4.574

MULTI-LAYER

LINE : 93WN3- 57

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	79.124	50	638	1034	1579	1622	0.040	0.017	0.018	0.019	0.029	0.001	0.001	1.429	0.361	0.559	0.030	2.350
1014	129.235	129	1667			1622	0.040	0.175			0.108			13.935			0.108	13.935
1026	175.492	175	1667			1667	0.040	0.031			0.036			6.265			0.036	6.265
1039	225.603	226	1667			1667	0.040	0.023			0.032			7.116			0.032	7.116
1051	271.859	40	555	1000	1579	1622	0.050	0.022	0.024	0.041	0.036	0.001	0.011	1.444	0.457	11.173	0.048	13.074
1064	231.618	232	1667			1622	0.050	0.026			0.038			8.829			0.038	8.829
1076	194.472	194	1667			1667	0.050	0.019			0.034			6.706			0.034	6.706
1089	134.231	154	1667			1667	0.050	0.014			0.032			4.918			0.032	4.918
1101	117.085	48	555	1071	1667	1667	0.042	0.017	0.023	0.025	0.029	0.003	0.001	1.413	1.894	0.606	0.033	3.913
1114	122.444	122	1667			1667	0.042	0.014			0.028			3.387			0.028	3.387
1126	127.390	127	1667			1714	0.042	0.020			0.031			3.939			0.031	3.939
1139	132.749	133	1765			1714	0.042	0.039			0.025			3.373			0.025	3.373
1151	137.696	48	625	1034	1667	1622	0.042	0.017	0.025	0.027	0.029	0.005	0.000	1.400	3.291	0.058	0.034	4.749
1164	122.730	123	1579			1622	0.042	0.017			0.029			3.611			0.029	3.611
1176	108.916	109	1667			1667	0.042	0.020			0.031			3.338			0.031	3.338
1189	93.950	94	1667			1667	0.042	0.019			0.030			2.831			0.030	2.831
1201	80.135	52	666	1071	1667	1622	0.038	0.022	0.023	0.024	0.030	0.001	0.001	1.577	0.377	0.564	0.031	2.518
1214	101.319	101	1579			1622	0.038	0.014			0.026			2.663			0.026	2.663
1226	120.874	121	1667			1667	0.038	0.016			0.027			3.270			0.027	3.270
1239	142.058	142	1667			1667	0.038	0.016			0.027			3.882			0.027	3.882
1255	168.130	48	555	1111	1667	1667	0.042	0.018	0.019	0.025	0.030	0.000	0.004	1.437	0.266	4.020	0.034	5.724
1268	168.130	168	1667			1667	0.042	0.017			0.029			4.915			0.029	4.915
1276	168.130	168	1667			1667	0.042	0.021			0.031			5.253			0.031	5.253
1289	168.130	168	1667			1667	0.042	0.016			0.029			4.830			0.029	4.830

MULTI-LAYER

LINE : 93MMJ- 59

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	149.920	40	416	1000	1667	1667	0.050	0.012	0.015	0.021	0.031	0.001	0.004	1.245	0.517	3.633	0.036	5.401
1014	139.159	139	1667			1667	0.050	0.022			0.036			5.027			0.036	5.027
1026	129.225	129	1667			1667	0.050	0.023			0.036			4.699			0.036	4.699
1039	118.466	118	1667			1667	0.050	0.024			0.037			4.394			0.037	4.394
1051	108.533	33	455	1000	1764	1714	0.061	0.022	0.025	0.030	0.041	0.002	0.003	1.358	0.722	2.870	0.046	4.951
1064	110.887	111	1667			1714	0.061	0.017			0.039			4.312			0.039	4.312
1076	113.061	113	1579			1579	0.061	0.020			0.040			4.540			0.040	4.540
1089	115.415	115	1579			1579	0.061	0.019			0.040			4.606			0.040	4.606
1101	117.588	40	455	1111	1579	1579	0.050	0.013	0.018	0.021	0.032	0.003	0.002	1.265	1.196	1.752	0.036	4.213
1114	124.570	125	1579			1579	0.050	0.016			0.033			4.092			0.033	4.092
1126	131.015	131	1667			1667	0.050	0.023			0.037			4.797			0.037	4.797
1139	137.996	138	1667			1667	0.050	0.016			0.033			4.570			0.033	4.570
1151	144.441	40	500	1053	1764	1714	0.050	0.021	0.027	0.032	0.035	0.003	0.003	1.415	1.655	2.917	0.041	5.986
1164	139.266	139	1667			1714	0.050	0.013			0.031			4.367			0.031	4.367
1176	134.490	134	1579			1579	0.050	0.021			0.035			4.758			0.035	4.758
1189	129.315	129	1579			1579	0.050	0.018			0.034			4.379			0.034	4.379
1201	124.539	40	400	1111	1667	1667	0.050	0.018	0.023	0.026	0.034	0.003	0.002	1.357	1.008	2.447	0.039	4.813
1214	113.606	114	1667			1667	0.050	0.022			0.036			4.099			0.036	4.099
1226	103.515	104	1579			1579	0.050	0.021			0.035			3.657			0.035	3.657
1239	92.583	93	1579			1579	0.050	0.022			0.036			3.316			0.036	3.316
1251	82.492	33	500	1053	1667	1622	0.061	0.020	0.022	0.025	0.040	0.001	0.001	1.325	0.572	1.647	0.042	3.543
1264	79.346	79	1579			1622	0.061	0.019			0.040			3.142			0.040	3.142
1276	76.442	76	1579			1579	0.061	0.010			0.035			2.702			0.035	2.702
1289	73.297	73	1579			1579	0.061	0.019			0.040			2.902			0.040	2.902
1301	70.393	33	476	1000	1667	1622	0.061	0.017	0.021	0.022	0.039	0.002	0.001	1.284	0.908	0.732	0.042	2.924
1314	70.393	70	1579			1622	0.061	0.015			0.038			2.646			0.038	2.646
1320	70.393	70	1764			1666	0.061	0.025			0.043			3.015			0.043	3.015

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HASIL PENGOLAHAN DATA

1. LINE 93WNJ-16
2. LINE 93WNJ-18
3. LINE 93WNJ-20
4. LINE 93WNJ-20A
5. LINE 93WNJ-26
6. LINE 93WNJ-28
7. LINE 93WNJ-30
8. LINE 93WNJ-32

(MULTI-LAYER)

LINE : 93WNJ- 16

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1501	157.364																	
1500	157.364	50	588	1052	1579	1579	0.040	0.0090	0.0105	0.0145	0.025	0.001	0.003	1.229	0.466	2.684	0.028	4.402
1499	159.218																	
1498	161.073																	
1497	162.928																	
1496	164.783																	
1495	166.638																	
1494	168.493																	
1493	170.348																	
1492	172.203																	
1491	174.057																	
1490	175.912																	
1489	177.767																	
1488	179.622	180	1579			1579	0.040	0.0150			0.026			4.972			0.026	4.972
1487	181.477																	
1486	183.332																	
1485	185.187																	
1484	187.042																	
1483	188.896																	
1482	190.751																	
1481	192.606																	
1480	194.461																	
1479	196.316																	
1478	198.171																	
1477	200.026																	
1476	201.881																	
1475	203.735	204	1667			1644	0.040	0.0235			0.032			6.517			0.032	6.517
1474	205.590																	
1473	207.445																	
1472	209.300																	
1471	211.155																	
1470	213.010																	
1469	214.865																	
1468	216.720																	
1467	218.574																	
1466	220.429																	
1465	222.284																	
1464	224.139																	
1463	225.994	226	1622			1644	0.040	0.0200			0.030			6.847			0.030	6.847
1462	227.849																	
1461	229.704																	
1460	231.559																	
1459	233.413																	
1458	235.268																	
1457	237.123																	
1456	238.978																	
1455	240.833																	
1454	242.688																	
1453	244.543																	
1452	246.398																	
1451	248.252																	
1450	250.107	53	588	1111	1667	1667	0.036	0.0090	0.0155	0.0220	0.023	0.004	0.004	1.244	2.205	4.333	0.031	7.782
1449	251.275																	
1448	252.442																	
1447	253.610																	
1446	254.777																	
1445	255.944																	
1444	257.112																	
1443	258.279																	
1442	259.447																	
1441	260.614																	
1440	261.781																	
1439	262.949																	
1438	264.116	264	1667			1667	0.036	0.0210			0.030			7.856			0.030	7.856
1437	265.284																	
1436	266.451																	
1435	267.618																	
1434	268.786																	
1433	269.953																	
1432	271.121																	
1431	272.288																	
1430	273.455																	
1429	274.623																	
1428	275.790																	
1427	276.958																	
1426	278.125																	
1425	279.293	279	1667			1667	0.036	0.0275			0.033			9.241			0.033	9.241
1424	280.460																	
1423	281.627																	
1422	282.795																	
1421	283.962																	
1420	285.130																	
1419	286.297																	
1418	287.464																	
1417	288.632																	
1416	289.799																	
1415	290.967																	
1414	292.134																	
1413	293.301	293	1667			1667	0.036	0.0165			0.028			8.080			0.028	8.080
1412	294.469																	
1411	295.636																	
1410	296.804																	
1409	297.971																	
1408	299.138																	
1407	300.306																	
1406	301.473																	
1405	302.641																	
1404	303.808																	
1403	304.975																	
1402	306.143																	
1401	307.310																	
1400	308.478	55	625	1111	1579	1500	0.036	0.0120	0.0140	0.0245	0.024	0.001	0.007	1.335	0.707	8.023	0.033	10.065
1399	309.828																	
1398	301.177																	
1397	297.527																	
1396	293.877																	
1395	290.227																	
1394	286.577																	
1393	282.927																	
1392	279.276																	
1391	275.626																	
1390	271.976																	
1389	268.326																	
1388	264.676	265	1622			1600	0.036	0.0235			0.030			8.030			0.030	8.030
1387	261.026																	
1386	257.375																	

(MULTI-LAYER)

LINE : 03WNJ- 18

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1584	266.517																	
1583	266.517	33	294	937	1667	1667	0.061	0.010	0.013	0.033	0.036	0.001	0.012	1.172	0.324	11.552	0.049	13.048
1582	264.039																	
1581	261.561																	
1580	259.083																	
1579	256.605																	
1578	254.128																	
1577	251.650																	
1576	249.172																	
1575	246.695																	
1574	244.217																	
1573	241.739																	
1572	239.261																	
1571	236.784	237	1667			1667	0.061	0.018			0.040			9.402			0.040	9.402
1570	234.306																	
1569	231.828																	
1568	229.350																	
1567	226.873																	
1566	224.395																	
1565	221.917																	
1564	219.439																	
1563	216.962																	
1562	214.484	214	1667			1667	0.061	0.023			0.042			9.041			0.042	9.041
1561	212.006																	
1560	209.528																	
1559	207.051																	
1558	204.573																	
1557	202.095																	
1556	199.617																	
1555	197.140																	
1554	194.662																	
1553	192.184																	
1552	189.706																	
1551	187.229																	
1550	184.751	185	1667			1667	0.061	0.019			0.040			7.353			0.040	7.353
1549	182.273																	
1548	179.795																	
1547	177.318																	
1546	174.840																	
1545	172.362																	
1544	169.884																	
1543	167.407																	
1542	164.929	33	400	882	1579	1822	0.091	0.015	0.018	0.029	0.036	0.002	0.008	1.252	0.827	5.702	0.046	7.58
1541	164.041																	
1540	163.152																	
1539	162.264																	
1538	161.375																	
1537	160.487																	
1536	159.599																	
1535	158.710																	
1534	157.822																	
1533	156.934																	
1532	156.045																	
1531	155.157																	
1530	154.268	154	1667			1822	0.061	0.019			0.040			6.167			0.040	6.16
1529	153.380																	
1528	152.492																	
1527	151.603																	
1526	150.715																	
1525	149.827																	
1524	148.938																	
1523	148.050																	
1522	147.161																	
1521	146.273																	
1520	145.385																	
1519	144.496																	
1518	143.608																	
1517	142.720																	
1516	141.831																	
1515	140.943																	
1514	140.054																	
1513	139.166																	
1512	138.278																	
1511	137.389																	
1510	136.501																	
1509	135.613																	
1508	134.724	135	1667			1822	0.061	0.022			0.041			8.549			0.041	8.54
1507	133.836																	
1506	132.947																	
1505	132.059																	
1504	131.171																	
1503	130.282																	
1502	129.394																	
1501	128.506																	
1500	127.617																	
1499	126.729																	
1498	125.840																	
1497	124.952																	
1496	124.064	124	1579			1822	0.061	0.016			0.039			4.660			0.039	4.8
1495	123.175																	
1494	122.287																	
1493	121.399																	
1492	120.510																	
1491	119.622																	
1490	118.733																	
1489	117.845																	

1466	116.957																		
1467	116.668																		
1468	115.180																		
1465	114.292																		
1464	113.403																		
1463	112.515	40	250	882	1667	1822	0.050	0.011	0.020	0.024	0.031	0.004	0.002	1.236	1.012	1.930	0.037	4.178	
1462	112.792																		
1461	113.070																		
1460	113.347																		
1479	113.624																		
1478	113.902																		
1477	114.179																		
1476	114.457																		
1475	114.734																		
1474	115.011																		
1473	115.289																		
1472	115.566																		
1471	115.844	116	1622			1622	0.050	0.020			0.035			4.065			0.035	4.065	
1470	116.121																		
1469	116.398																		
1468	116.676																		
1467	116.953																		
1466	117.231																		
1465	117.508																		
1464	117.785																		
1463	118.063																		
1462	118.340																		
1461	118.618																		
1460	118.895																		
1459	119.172																		
1458	119.450	119	1622			1622	0.050	0.017			0.034			4.012			0.034	4.012	
1457	119.727																		
1456	120.005																		
1455	120.282																		
1454	120.559																		
1453	120.837																		
1452	121.114																		
1451	121.392																		
1450	121.669																		
1449	121.946																		
1446	122.224																		
1447	122.501																		
1446	122.779	123	1622			1622	0.050	0.016			0.034			4.156			0.034	4.156	
1445	123.056																		
1444	123.333																		
1443	123.611																		
1442	123.888																		
1441	124.166																		
1440	124.443																		
1439	124.720																		
1438	124.998																		
1437	125.275																		
1436	125.553																		
1435	125.830																		
1434	126.107																		
1433	126.385	33	370	1000	1667	1822	0.061	0.015	0.023	0.028	0.038	0.004	0.003	1.244	1.541	2.869	0.045	5.654	
1432	128.134																		
1431	129.883																		
1430	131.631																		
1429	133.380																		
1428	135.129																		
1427	136.878																		
1426	138.627																		
1425	140.376																		
1424	142.125																		
1423	143.874																		
1422	145.623																		
1421	147.372	147	1579			1822	0.061	0.010			0.035			5.186			0.035	5.186	
1420	149.120																		
1419	150.869																		
1418	152.618																		
1417	154.367																		
1416	156.116																		
1415	157.865																		
1414	159.614																		
1413	161.363																		
1412	163.112																		
1411	164.861																		
1410	166.609																		
1409	168.358																		
1408	170.107																		
1407	171.856																		
1406	173.605																		
1405	175.354																		
1404	177.103																		
1403	178.852																		
1402	180.601																		
1401	182.350																		
1400	184.099																		
1399	185.847																		
1398	187.596																		
1397	189.345	189	1667			1667	0.061	0.019			0.040			7.566			0.040	7.566	
1396	191.094																		
1395	192.843																		
1394	194.592																		
1393	196.341																		
1392	198.090																		
1391	199.839																		
1390	201.588																		
1389	203.336																		
1388	205.085																		
1387	206.834																		
1386	208.583																		
1385	210.332	210	1667			1667	0.061	0.013			0.037			7.750			0.037	7.750	
1384	212.081																		
1383	213.830																		

1382	215.579																	
1381	217.328																	
1380	219.077																	
1379	220.825																	
1378	222.574																	
1377	224.323	40	250	1000	1667	1622	0.050	0.017	0.009	0.020	0.029	0.001	0.007	1.155	0.168	6.859	0.036	6.162
1376	221.351																	
1375	218.378																	
1374	215.406																	
1373	212.434																	
1372	209.461																	
1371	206.489																	
1370	203.516																	
1369	200.544																	
1368	197.571																	
1367	194.599																	
1366	191.627																	
1365	188.654	189	1579			1622	0.050	0.015			0.034			6.508			0.034	6.508
1364	185.682																	
1363	182.709																	
1362	179.737																	
1361	176.765																	
1360	173.792																	
1359	170.820																	
1358	167.847	168	1579			1579	0.050	0.023			0.037			6.161			0.037	6.161
1357	164.875																	
1356	161.902																	
1355	158.930																	
1354	155.958																	
1353	152.985																	
1352	150.013																	
1351	147.040																	
1350	144.068																	
1349	141.095																	
1348	138.123																	
1347	135.151																	
1346	132.178	132	1579			1579	0.050	0.013			0.032			4.178			0.032	4.178
1345	129.206																	
1344	126.233																	
1343	123.261																	
1342	120.289																	
1341	117.316																	
1340	114.344																	
1339	111.371																	
1338	108.399																	
1337	105.426																	
1336	102.454																	
1335	99.482																	
1334	96.509																	
1333	93.537	33	400	1000	1579	1579	0.061	0.017	0.019	0.023	0.039	0.001	0.002	1.277	0.497	2.163	0.042	3.937
1332	93.764																	
1331	93.992																	
1330	94.219																	
1329	94.446																	
1328	94.674																	
1327	94.901																	
1326	95.129																	
1325	95.356																	
1324	95.584																	
1323	95.811																	
1322	96.038																	
1321	96.266	98	1579			1579	0.061	0.021			0.041			3.935			0.041	3.935
1320	96.493																	
1319	96.721																	
1318	96.948																	
1317	97.176																	
1316	97.403																	
1315	97.630																	
1314	97.858																	
1313	98.085																	
1312	98.313																	
1311	98.540																	
1310	98.768																	
1309	98.995																	
1308	99.222	99	1714			1690	0.061	0.022			0.041			4.080			0.041	4.080
1307	99.450																	
1306	99.677																	
1305	99.905																	
1304	100.132																	
1303	100.360																	
1302	100.587																	
1301	100.814																	
1300	101.042																	
1299	101.269																	
1298	101.497																	
1297	101.724																	
1296	101.952	102	1667			1690	0.061	0.022			0.041			4.193			0.041	4.193
1295	102.179																	
1294	102.406																	
1293	102.634																	
1292	102.861																	
1291	103.089																	
1290	103.316																	
1289	103.544																	
1288	103.771																	
1287	103.998																	
1286	104.226																	
1285	104.453																	
1284	104.681																	
1283	104.908	33	416	1000	1667	1667	0.061	0.016	0.018	0.022	0.038	0.001	0.003	1.260	0.412	2.723	0.042	4.394

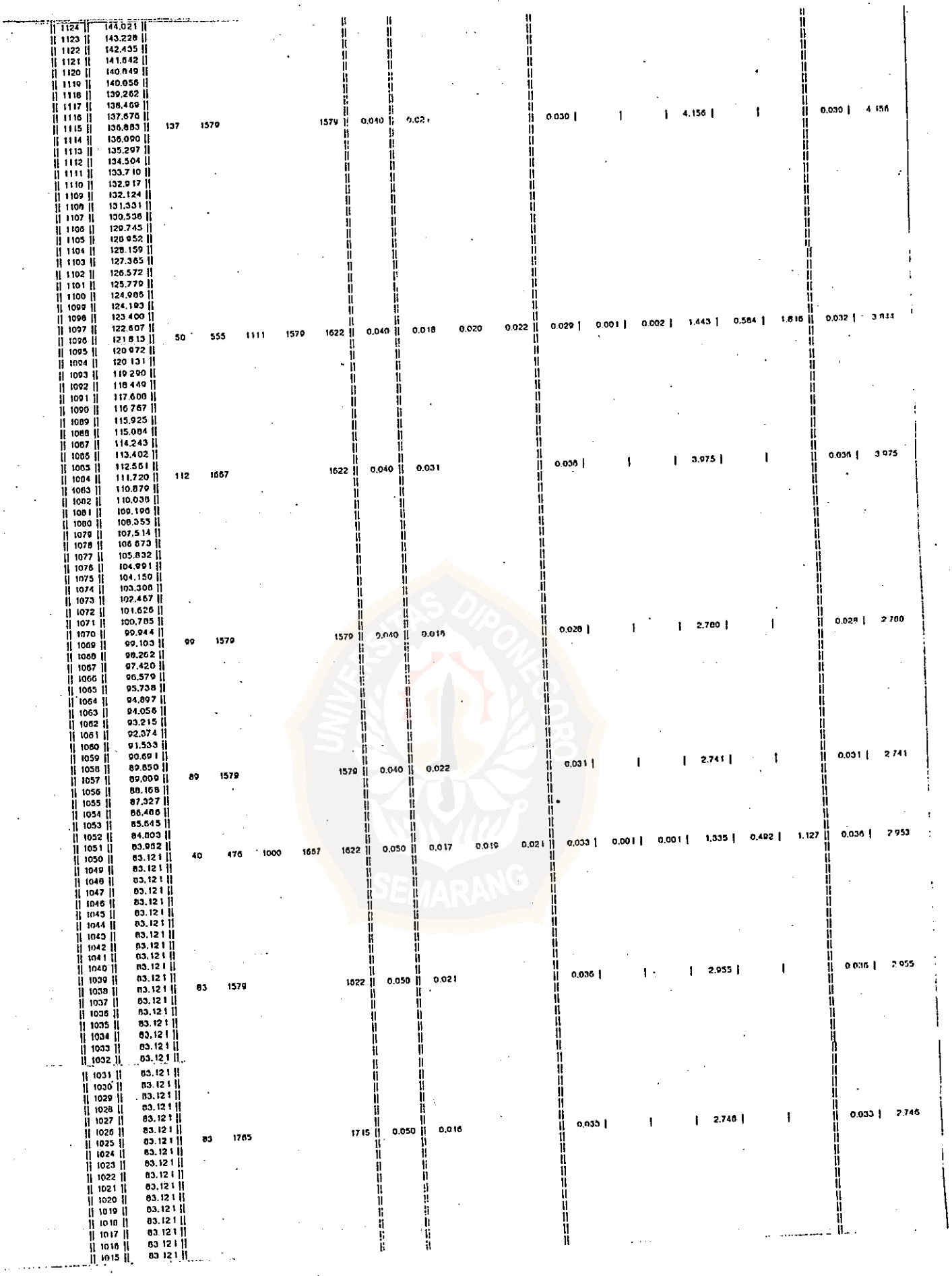
(MULTI--LAYER)

LINE : 93 WNJ--20

SP.NO	Vw	V1	V2	V3	V4	Vav	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1451	153.880																	
1450	153.580	40	455	1000	1765	1765	0.050	0.015	0.019	0.026	0.033	0.002	0.004	1.315	0.843	5.752	0.038	5.910
1449	152.990																	
1448	152.400																	
1447	151.810																	
1446	151.220																	
1445	150.630																	
1444	150.041																	
1443	149.451																	
1442	148.861																	
1441	148.271																	
1440	147.681																	
1439	147.091																	
1438	146.502	147	1765			1765	0.050	0.025			0.037			5.366			0.037	5.366
1437	145.912																	
1436	145.322																	
1435	144.732																	
1434	144.142																	
1433	143.553																	
1432	142.963																	
1431	142.373																	
1430	141.783																	
1429	141.193																	
1428	140.603																	
1427	140.014																	
1426	139.424																	
1425	138.834	139	1667			1667	0.050	0.025			0.037			5.190			0.037	5.190
1424	138.244																	
1423	137.654																	
1422	137.064																	
1421	136.475																	
1420	135.885																	
1419	135.295																	
1418	134.705																	
1417	134.115																	
1416	133.525																	
1415	132.936																	
1414	132.346																	
1413	131.756	132	1667			1667	0.050	0.010			0.030			3.932			0.030	3.932
1412	131.166																	
1411	130.576																	
1410	129.987																	
1409	129.397																	
1408	128.807																	
1407	128.217																	
1406	127.627																	
1405	127.037																	
1404	126.448																	
1403	125.858																	
1402	125.268																	
1401	124.678																	
1400	124.088	40	416	1000	1667	1667	0.050	0.016	0.019	0.024	0.033	0.002	0.003	1.326	0.828	2.680	0.037	4.834
1399	123.575																	
1398	123.062																	
1397	123.449																	
1396	123.235																	
1395	123.022																	
1394	122.809																	
1393	122.596																	
1392	122.383																	
1391	122.170																	
1390	121.957																	
1389	121.743																	
1388	121.530	122	1667			1667	0.050	0.008			0.026			3.412			0.026	3.412
1387	121.317																	
1386	121.104																	
1385	120.891																	
1384	120.678																	
1383	120.465																	
1382	120.251																	
1381	120.038																	
1380	119.825																	
1379	119.612																	
1378	119.399																	
1377	119.186																	
1376	118.972																	
1375	118.759	119	1500			1538	0.050	0.016			0.034			4.051			0.034	4.051
1374	118.546																	
1373	118.333																	
1372	118.120																	
1371	117.907																	
1370	117.693																	
1369	117.480																	
1368	117.267																	
1367	117.054																	
1366	116.841																	
1365	116.626																	
1364	116.415																	
1363	116.201	116	1579			1538	0.050	0.025			0.036			4.224			0.036	4.224
1362	115.988																	
1361	115.775																	
1360	115.562																	
1359	115.349																	
1358	115.136																	
1357	114.922																	
1356	114.709																	
1355	114.496																	
1354	114.283																	
1353	114.070																	
1352	113.857																	
1351	113.643																	
1350	113.430	40	517	1111	1579	1579	0.050	0.019	0.023	0.026	0.034	0.002	0.002	1.374	1.287	1.709	0.038	4.349
1349	114.175																	

1348	114.919																						
1347	115.663																						
1346	116.408																						
1345	117.152																						
1344	117.896																						
1343	118.641																						
1342	119.385																						
1341	120.130																						
1340	120.874																						
1339	121.618																						
1338	122.363	122	1579				1579	0.050	0.020			0.035			4.296			0.035	4.296
1337	123.107																						
1336	123.851																						
1335	124.596																						
1334	125.340																						
1333	126.085																						
1332	126.829																						
1331	127.573																						
1330	128.318																						
1329	129.062																						
1328	129.806																						
1327	130.551																						
1326	131.295																						
1325	132.039	132	1667				1667	0.050	0.033			0.042			5.497			0.042	5.497
1324	132.784																						
1323	133.528																						
1322	134.273																						
1321	135.017																						
1320	135.761																						
1319	136.506																						
1318	137.250																						
1317	137.994																						
1316	138.739																						
1315	139.483																						
1314	140.227																						
1313	140.972	141	1667				1667	0.050	0.024			0.037			5.199			0.037	5.199
1312	141.716																						
1311	142.461																						
1310	143.205																						
1309	143.949																						
1308	144.694																						
1307	145.438																						
1306	146.182																						
1305	146.927																						
1304	147.671																						
1303	148.415																						
1302	149.160																						
1301	149.904																						
1300	150.649	40	418	1000	1579	1579		0.050	0.018	0.027	0.026	0.034	0.002	0.004	1.356	0.070	3.889	0.040	6.015
1299	149.971																						
1298	149.294																						
1297	148.617																						
1296	147.940																						
1295	147.262																						
1294	146.585																						
1293	145.908																						
1292	145.231																						
1291	144.553																						
1290	143.876																						
1289	143.199																						
1288	142.522	143	1579				1579	0.050	0.010			0.030			4.293			0.030	4.293
1287	141.844																						
1286	141.167																						
1285	140.490																						
1284	139.813																						
1283	139.135																						
1282	138.458																						
1281	137.781																						
1280	137.104																						
1279	136.426																						
1278	135.749																						
1277	135.072																						
1276	134.395	134	1579				1579	0.050	0.033			0.042			5.598			0.042	5.598
1275	133.717																						
1274	133.040																						
1273	132.363																						
1272	131.686																						
1271	131.008																						
1270	130.331																						
1269	129.654																						
1268	128.976																						
1267	128.299																						
1266	127.622																						
1265	126.945																						
1264	126.267																						
1263	125.590	126	1579				1579	0.050	0.018			0.035			4.647			0.035	4.647
1262	124.913																						
1261	124.236																						
1260	123.558																						
1259	122.881																						
1258	122.204																						
1257	121.527																						
1256	120.849																						
1255	120.172																						
1254	119.495																						
1253	118.818																						
1252	118.140																						
1251	117.463																						
1250	116.786	40	333	1000	1767	1658		0.050	0.021	0.035	0.032	0.036	0.003	0.002	1.420	1.155	2.238	0.041	4.813
1249	116.909																						
1248	117.192																						
1247	117.394																						
1246	117.597																						
1245	117.800																						
1244	118.003																						
1243	118.206																						
1242	118.409																						
1241	118.612																						
1240	118.814																						
1239	119.017																						
1238	119.220	119	1579				1658	0.050	0.014			0.032			3.826			0.032	3.826
1237	119.423																						

1236	119.626																				
1235	119.829																				
1234	120.031																				
1233	120.234																				
1232	120.437																				
1231	120.640																				
1230	120.843																				
1229	121.046																				
1228	121.249																				
1227	121.451																				
1226	121.654																				
1225	121.857	122	1500			1538	0.050	0.015			0.032			3.943			0.032	3.943			
1224	122.060																				
1223	122.263																				
1222	122.466																				
1221	122.668																				
1220	122.871																				
1219	123.074																				
1218	123.277																				
1217	123.480																				
1216	123.683																				
1215	123.885																				
1214	124.088																				
1213	124.291	124	1579			1538	0.050	0.007			0.026			3.522			0.026	3.522			
1212	124.494																				
1211	124.697																				
1210	124.900																				
1209	125.103																				
1208	125.305																				
1207	125.508																				
1206	125.711	40	384	1000	1579	1579	0.050	0.013	0.015	0.020	0.032	0.001	0.003	1.267	0.355	2.832	0.035	4.454			
1205	126.406																				
1204	127.101																				
1203	127.797																				
1202	128.492																				
1201	129.187																				
1200	129.882																				
1199	130.578																				
1198	131.273																				
1197	131.968																				
1196	132.663																				
1195	133.358																				
1194	134.054	134	1579			1579	0.050	0.017			0.033			4.473			0.033	4.473			
1193	134.749																				
1192	135.444																				
1191	136.139																				
1190	136.834																				
1189	137.530																				
1188	138.225																				
1187	138.920																				
1186	139.615																				
1185	140.310																				
1184	141.006																				
1183	141.701																				
1182	142.396																				
1181	143.091	143	1579			1622	0.050	0.016			0.033			4.742			0.033	4.742			
1180	143.786																				
1179	144.482																				
1178	145.177																				
1177	145.872																				
1176	146.567																				
1175	147.263																				
1174	147.958																				
1173	148.653																				
1172	149.348																				
1171	150.043																				
1170	150.739																				
1169	151.434	151	1667			1622	0.050	0.021			0.035			5.360			0.035	5.360			
1168	152.129																				
1167	152.824																				
1166	153.519																				
1165	154.215																				
1164	154.910																				
1163	155.605																				
1162	156.300																				
1161	156.995																				
1160	157.691																				
1159	158.386																				
1158	159.081																				
1157	159.776																				
1156	160.471																				
1155	161.167																				
1154	161.862																				
1153	162.557																				
1152	163.252																				
1151	163.948																				
1150	164.643	50	500	1111	1579	1579	0.040	0.013	0.016	0.020	0.027	0.002	0.003	1.332	0.780	2.970	0.031	5.002			
1149	163.850																				
1148	163.056																				
1147	162.263																				
1146	161.470																				
1145	160.677																				
1144	159.884																				
1143	159.091																				
1142	158.298																				
1141	157.505																				
1140	156.711																				
1139	155.918																				
1138	155.125	155	1579			1579	0.040	0.022			0.031			4.793			0.031	4.793			
1137	154.332																				
1136	153.539																				
1135	152.746																				
1134	151.953																				
1133	151.159																				
1132	150.366																				
1131	149.573																				
1130	148.780																				
1129	147.987																				
1128	147.194																				
1127	146.401	146	1579			1579	0.040	0.014			0.027			3.970			0.027	3.970			
1126	145.607																				
1125	144.814																				



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(MULTI-LAYER)

LINE : 93WNJ-20A

SP_NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1(s)	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1134	156.861																	
1133	156.681	50	625	1000	1765	1765	0.040	0.0185	0.0230	0.0270	0.029	0.002	0.003	1.467	1.355	2.597	0.034	5.419
1132	157.511																	
1131	156.141																	
1130	154.771																	
1129	153.401																	
1128	152.031																	
1127	150.661																	
1126	149.291																	
1125	147.921																	
1124	146.551																	
1123	145.181																	
1122	143.811																	
1121	142.441	142	1765			1765	0.040	0.0310			0.036			5.073			0.036	5.073
1120	141.071																	
1119	139.701																	
1118	138.331																	
1117	136.961																	
1116	135.591																	
1115	134.221																	
1114	132.851																	
1113	131.481																	
1112	130.111																	
1111	128.741																	
1110	127.371																	
1109	126.001																	
1108	124.632	125	1667			1690	0.040	0.0295			0.035			4.343			0.035	4.343
1107	123.262																	
1106	121.892																	
1105	120.522																	
1104	119.152																	
1103	117.782																	
1102	116.412																	
1101	115.042																	
1100	113.672																	
1099	112.302																	
1098	110.932																	
1097	109.562																	
1096	108.192	108	1714			1690	0.040	0.0310			0.036			3.648			0.036	3.648
1095	106.822																	
1094	105.452																	
1093	104.082																	
1092	102.712																	
1091	101.342																	
1090	99.972																	
1089	98.602																	
1088	97.232																	
1087	95.862																	
1086	94.492																	
1085	93.122																	
1084	91.752																	
1083	90.382																	
1082	89.012																	
1081	87.642	50	384	633	1667	1667	0.040	0.0175	0.0200	0.0220	0.029	0.001	0.001	1.450	0.457	0.626	0.031	2.732
1080	87.731																	
1079	87.820																	
1078	87.910																	
1077	87.999																	
1076	88.088																	
1075	88.178																	
1074	88.267																	
1073	88.356																	
1072	88.445																	
1071	88.535																	
1070	88.624																	
1069	88.713	89	1667			1667	0.040	0.0260			0.033			2.932			0.033	2.932
1068	88.803																	
1067	88.892																	
1066	88.981																	
1065	89.070																	
1064	89.160																	
1063	89.249																	
1062	89.338																	
1061	89.428																	
1060	89.517																	
1059	89.606																	
1058	89.695	90	1765			1765	0.040	0.0305			0.035			3.168			0.035	3.168
1057	89.785																	
1056	89.874																	
1055	89.963																	
1054	90.053																	
1053	90.142																	
1052	90.231																	
1051	90.320																	
1050	90.410																	
1049	90.499																	
1048	90.588																	
1047	90.678																	
1046	90.767	91	1765			1765	0.040	0.0265			0.033			3.022			0.033	3.022
1045	90.856																	
1044	90.946																	
1043	91.035																	
1042	91.124																	
1041	91.213																	
1040	91.303																	
1039	91.392																	

1038	91.401																	
1037	91.571																	
1036	91.660																	
1035	91.749																	
1034	91.838																	
1033	91.928	48	500	909	1579	1622	0.042	0.0175	0.0210	0.0225	0.030	0.002	0.001	1.427	0.990	0.553	0.032	2.970
1032	91.928																	
1031	91.928																	
1030	91.928																	
1029	91.928																	
1028	91.928																	
1027	91.928																	
1026	91.928																	
1025	91.928																	
1024	91.928																	
1023	91.928																	
1022	91.928																	
1021	91.928	92	1667			1622	0.042	0.0210			0.031			2.885			0.031	2.885
1020	91.928																	
1019	91.928																	
1018	91.928																	
1017	91.928																	
1016	91.928																	
1015	91.928																	
1014	91.928																	
1013	91.928																	
1012	91.928																	
1011	91.928																	
1010	91.928																	
1009	91.928																	
1008	91.928																	
1007	91.928																	
1006	91.928																	
1005	91.928																	
1004	91.928																	
1003	91.928																	
1002	91.928																	
1001	91.928																	

(MULTI-LAYER)

LINE : 03 WNJ-26

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	136.066																	
1002	136.066																	
1003	136.066																	
1004	136.066	51	600	1000	1667	1667	0.039	0.014	0.018	0.021	0.027	0.002	0.001	1.352	1.266	1.496	0.030	4.124
1005	141.167																	
1006	146.269																	
1007	151.371																	
1008	156.472																	
1009	161.574																	
1010	166.676																	
1011	171.777																	
1012	176.879																	
1013	181.981																	
1014	187.082																	
1015	192.184																	
1016	197.286																	
1017	202.387	202	1667			1667	0.039	0.021			0.030			6.139			0.030	6.139
1018	207.489																	
1019	212.591																	
1020	217.692																	
1021	222.794																	
1022	227.895																	
1023	232.998																	
1024	238.099																	
1025	243.201																	
1026	248.303	248	1765			1739	0.039	0.027			0.033			8.241			0.033	8.241
1027	253.404																	
1028	258.506																	
1029	263.608																	
1030	268.709																	
1031	273.811																	
1032	278.913																	
1033	284.014																	
1034	289.116																	
1035	294.218																	
1036	299.319																	
1037	304.421																	
1038	309.523																	
1039	314.624	315	1714			1739	0.039	0.022			0.031			9.716			0.031	9.716
1040	319.726																	
1041	324.828																	
1042	329.929																	
1043	335.031																	
1044	340.133																	
1045	345.234																	
1046	350.336																	
1047	355.438																	
1048	360.539																	
1049	365.641																	
1050	370.743																	
1051	375.845	46	500	1111	1667	1667	0.043	0.014	0.016	0.035	0.029	0.001	0.013	1.316	0.846	14.019	0.043	15.981
1052	375.272																	
1053	374.700																	
1054	374.128																	
1055	373.556																	
1056	372.983																	
1057	372.411																	
1058	371.839																	
1059	371.267																	
1060	370.695																	
1061	370.122																	
1062	369.550																	
1063	368.978																	
1064	368.406	368	1667			1667	0.043	0.030			0.038			13.878			0.038	13.878
1065	367.834																	
1066	367.261																	
1067	366.689																	
1068	366.117																	
1069	365.545																	
1070	364.972	365	1714			1714	0.043	0.029			0.037			13.443			0.037	13.443
1071	364.400																	
1072	363.828																	
1073	363.256																	
1074	362.684																	
1075	362.111																	
1076	361.539																	
1077	360.967																	
1078	360.395																	
1079	359.823																	
1080	359.250																	
1081	358.678																	
1082	358.106																	
1083	357.534	358	1714			1714	0.043	0.006			0.025			9.044			0.025	9.044
1084	356.961																	
1085	356.389																	
1086	355.817																	
1087	355.245																	
1088	354.673																	
1089	354.100																	
1090	353.528																	
1091	352.956																	
1092	352.384																	
1093	351.812																	
1094	351.239																	
1095	350.667																	
1096	350.095																	

1097	349.523																	
1098	348.951																	
1099	348.378																	
1100	347.806																	
1101	347.234	42	566	1111	1579	1579	0.048	0.014	0.015	0.032	0.031	0.000	0.012	1.297	0.134	13.635	0.043	15.066
1102	345.151																	
1103	343.027																	
1104	340.924																	
1105	338.821																	
1106	336.718																	
1107	334.615																	
1108	332.511																	
1109	330.408																	
1110	328.305																	
1111	326.202																	
1112	324.099																	
1113	321.995																	
1114	319.892	320	1579			1579	0.048	0.022			0.036			11.371			0.036	11.371
1115	317.789																	
1116	315.686																	
1117	313.583																	
1118	311.479																	
1119	309.376																	
1120	307.273																	
1121	305.170																	
1122	303.067																	
1123	300.963																	
1124	298.860																	
1125	296.757																	
1126	294.654	295	1714			1690	0.048	0.026			0.037			10.660			0.037	10.660
1127	292.551																	
1128	290.447																	
1129	288.344																	
1130	286.241																	
1131	284.138																	
1132	282.035																	
1133	279.931																	
1134	277.828																	
1135	275.725																	
1136	273.622																	
1137	271.518																	
1138	269.415																	
1139	267.312	267	1667			1690	0.048	0.024			0.036			9.630			0.036	9.630
1140	265.209																	
1141	263.106																	
1142	261.002																	
1143	258.899																	
1144	256.796																	
1145	254.693																	
1146	252.590																	
1147	250.486																	
1148	248.383																	
1149	246.280																	
1150	244.177																	
1151	242.074	42	555	1000	1765	1714	0.048	0.017	0.020	0.033	0.032	0.001	0.008	1.361	0.791	7.965	0.042	10.117
1152	241.364																	
1153	240.654																	
1154	239.944																	
1155	239.234																	
1156	238.525																	
1157	237.815																	
1158	237.105																	
1159	236.395																	
1160	235.686																	
1161	234.976																	
1162	234.266																	
1163	233.556																	
1164	232.846	233	1667			1714	0.048	0.035			0.042			9.714			0.042	9.714
1165	232.137																	
1166	231.427																	
1167	230.717																	
1168	230.007																	
1169	229.297																	
1170	228.588																	
1171	227.878																	
1172	227.168	227	1667			1667	0.048	0.036			0.043			9.617			0.043	9.617
1173	226.458																	
1174	225.748																	
1175	225.039																	
1176	224.329																	
1177	223.619																	
1178	222.909																	
1179	222.200																	
1180	221.490																	
1181	220.780																	
1182	220.070																	
1183	219.360																	
1184	218.651																	
1185	217.941	218	1667			1667	0.043	0.037			0.042			9.246			0.042	9.246
1186	217.231																	
1187	216.521																	
1188	215.811																	
1189	215.102																	
1190	214.392																	
1191	213.682																	
1192	212.972																	
1193	212.263																	
1194	211.553																	
1195	210.843																	
1196	210.133																	
1197	209.423																	
1198	208.714																	
1199	208.004																	
1200	207.294																	
1201	206.584	42	526	1000	1667	1667	0.048	0.018	0.031	0.038	0.033	0.008	0.004	1.372	3.973	3.735	0.044	9.080
1202	207.725																	
1203	208.867																	
1204	210.008																	

1205	211.149																		
1206	212.290																		
1207	213.431																		
1208	214.573																		
1209	215.714																		
1210	216.855																		
1211	217.996																		
1212	219.137																		
1213	220.279																		
1214	221.420	221	1667			1667	0.048	0.032			0.040			8.893			0.040	8.893	
1215	222.561																		
1216	223.702																		
1217	224.843																		
1218	225.985																		
1219	227.126																		
1220	228.267																		
1221	229.408																		
1222	230.549																		
1223	231.690																		
1224	232.832																		
1225	233.973																		
1226	235.114	235	1579			1622	0.048	0.013			0.031			7.207			0.031	7.207	
1227	236.255																		
1228	237.396																		
1229	238.538																		
1230	239.679																		
1231	240.820																		
1232	241.961																		
1233	243.102																		
1234	244.244																		
1235	245.385																		
1236	246.526																		
1237	247.667																		
1238	248.808																		
1239	249.950	250	1667			1622	0.048	0.031			0.040			9.875			0.040	9.875	
1240	251.091																		
1241	252.232																		
1242	253.373																		
1243	254.514																		
1244	255.656																		
1245	256.797																		
1246	257.938																		
1247	259.079																		
1248	260.220																		
1249	261.362																		
1250	262.503																		
1251	263.644	45	555	1000	1667	1714	0.044	0.015	0.016	0.032	0.030	0.002	0.008	1.342	0.955	8.173	0.040	10.471	
1252	264.202																		
1253	264.761																		
1254	265.319																		
1255	265.878																		
1256	266.436																		
1257	266.994																		
1258	267.553																		
1259	268.111																		
1260	268.670																		
1261	269.228																		
1262	269.786																		
1263	270.345																		
1264	270.903	271	1765			1714	0.044	0.024			0.034			9.314			0.034	9.314	
1265	271.462																		
1266	272.020																		
1267	272.579																		
1268	273.137																		
1269	273.695																		
1270	274.254																		
1271	274.812																		
1272	275.371																		
1273	275.929																		
1274	276.487																		
1275	277.046																		
1276	277.604	278	1714			1690	0.044	0.029			0.037			10.331			0.037	10.331	
1277	278.163																		
1278	278.721																		
1279	279.280																		
1280	279.838																		
1281	280.396																		
1282	280.955																		
1283	281.513																		
1284	282.072																		
1285	282.630																		
1286	283.188																		
1287	283.747																		
1288	284.305																		
1289	284.864	285	1667			1690	0.044	0.010			0.028			7.870			0.028	7.870	
1290	285.422																		
1291	285.981																		
1292	286.539																		
1293	287.097																		
1294	287.656																		
1295	288.214																		
1296	288.773																		
1297	289.331																		
1298	289.889																		
1299	290.448																		
1300	291.006																		
1301	291.565	52	526	1000	1765	1714	0.038	0.016	0.017	0.032	0.027	0.000	0.009	1.410	0.250	9.012	0.037	10.671	
1302	293.457																		
1303	295.348																		
1304	297.240																		
1305	299.132																		
1306	301.024																		
1307	302.916																		
1308	304.808																		
1309	306.699																		
1310	308.591																		
1311	310.483																		

1312	312.375																		
1313	314.267																		
1314	316.158	316	1667			1714	0.036	0.018			0.029			9.090			0.029	9.090	
1315	318.050																		
1316	319.942																		
1317	321.834																		
1318	323.726																		
1319	325.618																		
1320	327.509																		
1321	329.401																		
1322	331.293																		
1323	333.185																		
1324	335.077																		
1325	336.969																		
1326	338.860	339	1622			1690	0.038	0.022			0.031			10.389			0.031	10.389	
1327	340.752																		
1328	342.644																		
1329	344.536																		
1330	346.426																		
1331	348.320																		
1332	350.211																		
1333	352.103																		
1334	353.995																		
1335	355.887																		
1336	357.779																		
1337	359.671																		
1338	361.562																		
1339	363.454	363	1765			1690	0.038	0.021			0.030			11.042			0.030	11.042	
1340	365.346																		
1341	367.238																		
1342	369.130																		
1343	371.022																		
1344	372.913																		
1345	374.805																		
1346	376.697																		
1347	378.589																		
1348	380.481																		
1349	382.372																		
1350	384.264																		
1351	386.156	50	568	1052	1765	1714	0.040	0.015	0.016	0.036	0.027	0.001	0.014	1.367	0.404	14.263	0.042	16.114	
1352	388.250																		
1353	390.363																		
1354	377.466																		
1355	374.569																		
1356	371.672																		
1357	368.776																		
1358	365.879																		
1359	362.982																		
1360	360.085																		
1361	357.189																		
1362	354.292																		
1363	351.395																		
1364	348.498	348	1667			1714	0.040	0.029			0.035			12.295			0.035	12.295	
1365	345.602																		
1366	342.705																		
1367	339.808																		
1368	336.911																		
1369	334.015																		
1370	331.118																		
1371	328.221																		
1372	325.325																		
1373	322.428																		
1374	319.531																		
1375	316.634																		
1376	313.738	314	1765			1714	0.040	0.037			0.039			12.195			0.039	12.195	
1377	310.841																		
1378	307.944																		
1379	305.047																		
1380	302.151																		
1381	299.254																		
1382	296.357																		
1383	293.460																		
1384	290.564																		
1385	287.667																		
1386	284.770																		
1387	281.873																		
1388	278.977																		
1389	276.080	276	1667			1714	0.040	0.011			0.026			7.139			0.026	7.139	
1390	273.183																		
1391	270.286																		
1392	267.390																		
1393	264.493																		
1394	261.595																		
1395	258.699																		
1396	255.803																		
1397	252.906																		
1398	250.009																		
1399	247.112																		
1400	244.216																		
1401	241.319	48	602	1071	1667	1667	0.042	0.015	0.019	0.028	0.026	0.002	0.005	1.363	1.511	5.826	0.036	8.702	
1402	241.319																		
1403	241.319																		
1404	241.319																		
1405	241.319																		
1406	241.319																		
1407	241.319																		
1408	241.319																		
1409	241.319																		
1410	241.319																		
1411	241.319																		
1412	241.319																		
1413	241.319																		
1414	241.319	241	1667			1667	0.042	0.024			0.033			7.947			0.033	7.947	
1415	241.319																		
1416	241.319																		
1417	241.319																		
1418	241.319																		
1419	241.319																		
1420	241.319																		

1421	241.3 19														
1422	241.3 19														
1423	241.3 19														
1424	241.3 19														
1425	241.3 19														
1426	241.3 19	241	1765	17 14	0,042	0,035	0,038			9,277			0 039	9 277
1427	241.3 19														
1428	241.3 19														
1429	241.3 19														
1430	241.3 19														
1431	241.3 19														
1432	241.3 19														
1433	241.3 19														
1434	241.3 19														
1435	241.3 19														
1436	241.3 19														
1437	241.3 19														
1438	241.3 19														
1439	241.3 19	241	1667	17 14	0.042	0 020	0.031			7,459			0.031	7 459
1440	241.3 19														
1441	241.3 19														
1442	241.3 19														
1443	241.3 19														
1444	241.3 19														
1445	241.3 19														
1446	241.3 19														
1447	241.3 19														
1448	241.3 19														
1449	241.3 19														
1450	241.3 19														
1451	241.3 19														

(MULTI--LAYER)

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SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	85.113	40	556	1036	1667	1622	0.050	0.020	0.022	0.024	0.035	0.001	0.001	1.404	0.616	1.156	0.037	3.176
1002	85.336																	
1003	85.563																	
1004	85.788																	
1005	86.012																	
1006	86.237																	
1007	86.462																	
1008	86.687																	
1009	86.912																	
1010	87.137																	
1011	87.362																	
1012	87.587																	
1013	87.812																	
1014	88.037	88	1579			1622	0.050	0.029			0.036			3.196			0.036	3.196
1015	88.262																	
1016	88.486																	
1017	88.711																	
1018	88.936																	
1019	89.161																	
1020	89.386																	
1021	89.611																	
1022	89.836																	
1023	90.061																	
1024	90.286																	
1025	90.511																	
1026	90.736	91	1579			1622	0.050	0.019			0.034			3.113			0.034	3.113
1027	90.960																	
1028	91.185																	
1029	91.410																	
1030	91.635																	
1031	91.860																	
1032	92.085																	
1033	92.310																	
1034	92.535																	
1035	92.760																	
1036	92.985																	
1037	93.210																	
1038	93.434																	
1039	93.659	94	1667			1622	0.050	0.022			0.036			3.377			0.036	3.377
1040	93.884																	
1041	94.109																	
1042	94.334																	
1043	94.559																	
1044	94.784																	
1045	95.009																	
1046	95.234																	
1047	95.459																	
1048	95.684																	
1049	95.908	40	526	1000	1667	1622	0.050	0.016	0.015	0.021	0.033	0.001	0.001	1.314	0.731	1.370	0.036	3.415
1050	96.071																	
1051	96.233																	
1052	96.395																	
1053	96.557																	
1054	96.720																	
1055	96.882																	
1056	97.044																	
1057	97.206																	
1058	97.368																	
1059	97.531																	
1060	97.693																	
1061	97.855																	
1062	98.017	98	1579			1622	0.050	0.020			0.035			3.437			0.035	3.437
1063	98.180																	
1064	98.342																	
1065	98.504																	
1066	98.666																	
1067	98.828																	
1068	98.991																	
1069	99.153																	
1070	99.315																	
1071	99.477																	
1072	99.639																	
1073	99.802																	
1074	99.964																	
1075	100.126																	
1076	100.288																	
1077	100.451																	
1078	100.613																	
1079	100.775																	
1080	100.937	101	1579			1579	0.050	0.017			0.034			3.388			0.034	3.388
1081	101.099																	
1082	101.262																	
1083	101.424																	
1084	101.586																	
1085	101.748																	
1086	101.911																	
1087	102.073																	
1088	102.235																	
1089	102.397																	
1090	102.559																	

1091	102.722																				
1092	102.884																				
1093	103.046	103	1579			1579	0.050	0.014			0.032			3.279			0.032	3.279
1094	103.208																				
1095	103.370																				
1096	103.533																				
1097	103.695																				
1098	103.857																				
1099	104.019																				
1100	104.182																				
1101	104.344	50	384	833	1579	1579	0.040	0.017	0.020	0.023	0.029	0.001	0.002	1.437	0.566	1.315	0.032	3.318
1102	105.447																				
1103	106.550																				
1104	107.653																				
1105	108.756																				
1106	109.860																				
1107	110.963																				
1108	112.066																				
1109	113.169																				
1110	114.272																				
1111	115.376																				
1112	116.479																				
1113	117.582																				
1114	118.685	119	1579			1579	0.040	0.022			0.031			3.660			0.031	3.660
1115	119.788																				
1116	120.891																				
1117	121.995																				
1118	123.098																				
1119	124.201																				
1120	125.304																				
1121	126.407																				
1122	127.510																				
1123	128.614																				
1124	129.717																				
1125	130.820																				
1126	131.923	132	1667			1667	0.040	0.025			0.032			4.268			0.032	4.268
1127	133.026																				
1128	134.130																				
1129	135.233																				
1130	136.336																				
1131	137.439																				
1132	138.542																				
1133	139.645																				
1134	140.749																				
1135	141.852																				
1136	142.955																				
1137	144.058																				
1138	145.161																				
1139	146.264	146	1667			1667	0.010	0.020			0.030			4.405			0.030	4.405
1140	147.368																				
1141	148.471																				
1142	149.574																				
1143	150.677																				
1144	151.780																				
1145	152.884																				
1146	153.987																				
1147	155.090																				
1148	156.193																				
1149	157.296																				
1150	158.399																				
1151	159.503	56	455	1000	1579	1579	0.034	0.014	0.017	0.021	0.024	0.002	0.002	1.418	0.686	2.422	0.028	4.525
1152	159.086																				
1153	158.669																				
1154	158.252																				
1155	157.836																				
1156	157.419																				
1157	157.002																				
1158	156.585																				
1159	156.168																				
1160	155.752																				
1161	155.335																				
1162	154.918																				
1163	154.501																				
1164	154.085	154	1579			1579	0.034	0.021			0.026			4.295			0.026	4.295
1165	153.668																				
1166	153.251																				
1167	152.834																				
1168	152.418																				
1169	152.001																				
1170	151.584																				
1171	151.167																				
1172	150.751																				
1173	150.334																				
1174	149.917																				
1175	149.500																				
1176	149.084	149	1667			1667	0.034	0.035			0.035			5.200			0.035	5.200
1177	148.667																				
1178	148.250																				
1179	147.833																				
1180	147.417																				
1181	147.000																				
1182	146.583																				
1183	146.166																				
1184	145.749																				
1185	145.333																				
1186	144.916																				
1187	144.499																				
1188	144.082																				
1189	143.666	144	1667			1667	0.034	0.012			0.023			3.315			0.023	3.315
1190	143.249																				
1191	142.832																				
1192	142.415																				
1193	141.999																				
1194	141.582																				
1195	141.165																				
1196	140.748																				
1197	140.332																				
1198	139.915																				

1196	139.496																	
1200	139.681																	
1201	136.865	43	441	611	1765	1765	0.047	0.025	0.034	0.040	0.036	0.005	0.003	1.545	2.170	2.351	0.044	6.066
1202	140.406																	
1203	142.151																	
1204	143.894																	
1205	145.637																	
1206	147.380																	
1207	149.123																	
1208	150.867																	
1209	152.610																	
1210	154.353																	
1211	156.096																	
1212	157.839																	
1213	159.582																	
1214	161.325	161	1765			1765	0.047	0.024			0.035			5.712			0.035	5.712
1215	163.068																	
1216	164.812																	
1217	166.555																	
1218	168.298																	
1219	170.041																	
1220	171.784																	
1221	173.527																	
1222	175.270																	
1223	177.014																	
1224	178.757																	
1225	180.500																	
1226	182.243	162	1657			1622	0.047	0.017			0.032			5.776			0.032	5.776
1227	183.986																	
1228	185.729																	
1229	187.472																	
1230	189.216																	
1231	190.959																	
1232	192.702																	
1233	194.445																	
1234	196.188																	
1235	197.931																	
1236	199.674																	
1237	201.418																	
1238	203.161																	
1239	204.904	205	1579			1622	0.047	0.013			0.030			6.097			0.030	6.097
1240	206.647																	
1241	208.390																	
1242	210.133																	
1243	211.876																	
1244	213.619																	
1245	215.363																	
1246	217.106																	
1247	218.849																	
1248	220.592																	
1249	222.335																	
1250	224.078																	
1251	225.821	50	469	937	1765	1765	0.040	0.014	0.028	0.036	0.027	0.008	0.004	1.358	3.594	3.835	0.039	8.787
1252	227.565																	
1253	227.565																	
1254	227.565																	
1255	227.565																	
1256	227.565																	
1257	227.565																	
1258	227.565																	
1259	227.565																	
1260	227.565																	
1261	227.565																	
1262	227.565																	
1263	227.565																	
1264	227.565	228	1765			1765	0.040	0.024			0.032			7.286			0.032	7.286
1265	227.565																	
1266	227.565																	
1267	227.565																	

(MULTI- LAYER)

LINE : 05WNJ – 30

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	163.456	50	652	1034	1667	1667	0.040	0.015	0.020	0.024	0.028	0.003	0.002	1.379	1.849	2.071	0.032	5.299
1002	163.293																	
1003	163.129																	
1004	162.966																	
1005	162.803																	
1006	162.639																	
1007	162.476																	
1008	162.313																	
1009	162.149																	
1010	161.986																	
1011	161.823																	
1012	161.660																	
1013	161.496																	
1014	161.333	161	1667			1667	0.040	0.014			0.027			4.336			0.027	4.336
1015	161.170																	
1016	161.006																	
1017	160.843																	
1018	160.680																	
1019	160.516																	
1020	160.353																	
1021	160.190																	
1022	160.026																	
1023	159.863																	
1024	159.700																	
1025	159.536																	
1026	159.373																	
1027	159.210																	
1028	159.046																	
1029	158.883																	
1030	158.720																	
1031	158.557																	
1032	158.393																	
1033	158.230																	
1034	158.067																	
1035	157.903																	
1036	157.740																	
1037	157.577																	
1038	157.413																	
1039	157.250																	
1040	157.087																	
1041	156.923																	
1042	156.760																	
1043	156.597																	
1044	156.433																	
1045	156.270																	
1046	156.107																	
1047	155.943																	
1048	155.780																	
1049	155.617																	
1050	155.453																	
1051	155.290																	
1052	155.127																	
1053	154.964																	
1054	154.800																	
1055	154.637																	
1056	154.474																	
1057	154.310																	
1058	154.147																	
1059	153.984																	
1060	153.820	66	638	1200	1667	1667	0.030	0.016	0.021	0.022	0.023	0.003	0.001	1.556	1.627	0.926	0.027	4.092
1061	155.055																	
1062	156.289																	
1063	157.523																	
1064	158.757																	
1065	159.991																	
1066	161.226																	
1067	162.460																	
1068	163.694																	
1069	164.928																	
1070	166.163																	
1071	167.397																	
1072	168.631																	
1073	169.865	170	1667			1667	0.030	0.013			0.022			3.697			0.022	3.697
1074	171.100																	
1075	172.334																	
1076	173.568																	
1077	174.802																	
1078	176.037																	
1079	177.271																	
1080	178.505																	
1081	179.739																	
1082	180.974																	
1083	182.208																	
1084	183.442																	
1085	184.676																	
1086	185.910																	
1087	187.145	187	1667			1667	0.030	0.025			0.026			5.208			0.020	5.208
1088	188.379																	
1089	189.613																	
1090	190.847																	
1091	192.082																	
1092	193.316																	
1093	194.550																	

1094	195.784																				
1095	197.019																				
1096	198.253																				
1097	199.487																				
1098	200.721																				
1099	201.956																				
1100	203.190	203	1667			1667	0.030	0.016			0.023			4.739			0.023	4.739			
1101	204.424																				
1102	205.658																				
1103	206.893																				
1104	208.127																				
1105	209.361																				
1106	210.595																				
1107	211.829																				
1108	213.064																				
1109	214.298																				
1110	215.532																				
1111	216.766																				
1112	218.001	63	580	1000	1667	1667	0.032	0.014	0.017	0.024	0.023	0.002	0.004	1.450	1.004	3.760	0.026	6.213			
1113	219.732																				
1114	221.464																				
1115	223.196																				
1116	224.927																				
1117	226.659																				
1118	228.390																				
1119	230.122																				
1120	231.854																				
1121	233.585																				
1122	235.317																				
1123	237.049																				
1124	238.780																				
1125	240.512	241	1667			1667	0.032	0.017			0.024			5.863			0.024	5.863			
1126	242.243																				
1127	243.975																				
1128	245.707																				
1129	247.438																				
1130	249.170																				
1131	250.902																				
1132	252.633																				
1133	254.365																				
1134	256.097																				
1135	257.828																				
1136	259.560																				
1137	261.291	261	1667			1667	0.032	0.022			0.027			7.043			0.027	7.043			
1138	263.023																				
1139	264.755																				
1140	266.486																				
1141	268.218																				
1142	269.950																				
1143	271.681																				
1144	273.413																				
1145	275.144																				
1146	276.876																				
1147	278.608																				
1148	280.339																				
1149	282.071																				
1150	283.803	284	1667			1667	0.032	0.020			0.026			7.452			0.026	7.452			
1151	285.534																				
1152	287.266																				
1153	288.998																				
1154	290.729																				
1155	292.461																				
1156	294.192																				
1157	295.924																				
1158	297.656																				
1159	299.387																				
1160	301.119																				
1161	302.851																				
1162	304.582	71	600	1200	1667	1622	0.028	0.011	0.017	0.023	0.019	0.003	0.004	1.302	2.007	4.771	0.027	8.160			
1163	304.582																				
1164	304.582																				
1165	304.582																				
1166	304.582																				
1167	304.582																				
1168	304.582																				
1169	304.582																				
1170	304.582																				
1171	304.582																				
1172	304.582																				
1173	304.582																				
1174	304.582																				
1175	304.582	305	1579			1622	0.028	0.020			0.025			7.476			0.025	7.476			
1176	304.582																				
1177	304.582																				
1178	304.582																				
1179	304.582																				
1180	304.582																				
1181	304.582																				
1182	304.582																				
1183	304.582																				
1184	304.582																				
1185	304.582																				
1186	304.582																				
1187	304.582	305	1579			1622	0.028	0.022			0.026			7.787			0.026	7.787			
1188	304.582																				
1189	304.582																				
1190	304.582																				
1191	304.582																				

(MULTI-LAYER)

LINE : 93WNJ - 32

SP.NO	Vw	V1	V2	V3	V4	Vsw	Tcharge	T1	T2(s)	T3(s)	Tw1(s)	Tw2(s)	Tw3(s)	Dw1(m)	Dw2(m)	Dw3(m)	STw(s)	SDw(m)
1001	127.006																	
1002	127.006																	
1003	127.006																	
1004	127.006	52	526	1071	1667	1622	0.036	0.018	0.024	0.026	0.026	0.003	0.001	1.475	1.597	1.040	0.032	4.112
1005	127.122																	
1006	127.239																	
1007	127.355																	
1008	127.472																	
1009	127.588																	
1010	127.705																	
1011	127.821																	
1012	127.938																	
1013	128.054																	
1014	128.171																	
1015	128.287																	
1016	128.403																	
1017	128.520	129	1579			1622	0.036	0.019			0.029			3.705			0.029	3.705
1018	128.636																	
1019	128.753																	
1020	128.869																	
1021	128.986																	
1022	129.102																	
1023	129.219																	
1024	129.335																	
1025	129.452																	
1026	129.568																	
1027	129.685																	
1028	129.801																	
1029	129.918																	
1030	130.034	130	1667			1667	0.036	0.021			0.030			3.878			0.030	3.878
1031	130.151																	
1032	130.267																	
1033	130.384																	
1034	130.500																	
1035	130.617																	
1036	130.733																	
1037	130.850																	
1038	130.966																	
1039	131.082																	
1040	131.199																	
1041	131.315																	
1042	131.432																	
1043	131.548	132	1667			1667	0.036	0.021			0.030			3.923			0.030	3.923
1044	131.665																	
1045	131.781																	
1046	131.898																	
1047	132.014																	
1048	132.131																	
1049	132.247																	
1050	132.364																	
1051	132.480	50	526	1000	1667	1622	0.040	0.020	0.020	0.025	0.030	0.000	0.003	1.494	0.094	2.760	0.033	4.349
1052	132.406																	
1053	132.331																	
1054	132.257																	
1055	132.182																	
1056	132.108																	
1057	132.033																	
1058	131.958																	
1059	131.884																	
1060	131.809																	
1061	131.735																	
1062	131.660																	
1063	131.586																	
1064	131.511	132	1579			1622	0.040	0.021			0.030			3.992			0.030	3.992
1065	131.437																	
1066	131.362																	
1067	131.288																	
1068	131.213																	
1069	131.139																	
1070	131.064																	
1071	130.989																	
1072	130.915																	
1073	130.840																	
1074	130.766																	
1075	130.691																	
1076	130.617	131	1667			1622	0.040	0.023			0.032			4.127			0.032	4.127
1077	130.542																	
1078	130.468																	
1079	130.393																	
1080	130.319																	
1081	130.244																	
1082	130.170																	
1083	130.095																	
1084	130.021																	
1085	129.946																	
1086	129.871																	
1087	129.797																	
1088	129.722																	
1089	129.648	130	1579			1622	0.040	0.019			0.030			3.838			0.030	3.838
1090	129.573																	
1091	129.499																	
1092	129.424																	

1093	129.350																		
1094	129.275																		
1095	129.201																		
1096	129.126																		
1097	129.052																		
1098	128.977																		
1099	128.902																		
1100	128.828																		
1101	128.753																		
1102	128.679																		
1103	128.604																		
1104	128.530																		
1105	128.455																		
1106	128.381																		
1107	128.306																		
1108	128.232																		
1109	128.157																		
1110	128.083	51	384	1034	1667	1667	0.039	0.014	0.017	0.020	0.027	0.002	0.002	1.356	0.640	1.853	0.030	3.849	
1111	128.083																		
1112	128.083																		
1113	128.083																		
1114	128.083																		
1115	128.083																		
1116	128.083																		
1117	128.083																		
1118	128.083																		
1119	128.083																		
1120	128.083																		
1121	128.083																		
1122	128.083																		
1123	128.083	128	1667			1667	0.039	0.023			0.031			3.964			0.031	3.964	
1124	128.083																		
1125	128.083																		
1126	128.083																		
1127	128.083																		
1128	128.083																		
1129	128.083																		
1130	128.083																		
1131	128.083																		
1132	128.083																		
1133	128.083																		
1134	128.083																		
1135	128.083	128	1667			1667	0.039	0.025			0.032			4.093			0.032	4.093	
1136	128.083																		
1137	128.083																		
1138	128.083																		
1139	128.083																		
1140	128.083																		
1141	128.083																		
1142	128.083																		
1143	128.083																		
1144	128.083																		
1145	128.083																		
1146	128.083																		
1147	128.083																		
1148	128.083	128	1667			1667	0.039	0.016			0.029			3.675			0.029	3.675	
1149	128.083																		
1150	128.083																		
1151	128.083																		
1152	128.083																		
1153	128.083																		
1154	128.083																		
1155	128.083																		
1156	128.083																		
1157	128.083																		
1158	128.083																		
1159	128.083																		
1160	128.083																		
1161	128.083																		
1162	128.083																		
1163	128.083																		
1164	128.083																		
1165	128.083																		
1166	128.083																		
1167	128.083																		

LAMPIRAN D

DATA LAPANGAN

SURVEY WEATHERING ZONE
DAN SURVEY REFRAKSI
UNTUK LINE 93WNJ-07

DISK DATA : ID NO. 161
DATE;TIME : 00 10 93 .09:17:05 AM
CHANNEL NO. : 24 [channel]
WORD LENGTH : 1024 [word]
SAMPLE TIME : 0.400 [milli second]
TRIGGER TIME : 20.000 [milli second]
LOW CUT FILTER : 10 [Hz]
HIGH CUT FILTER: 140 [Hz]

Line : 93WNJ-07

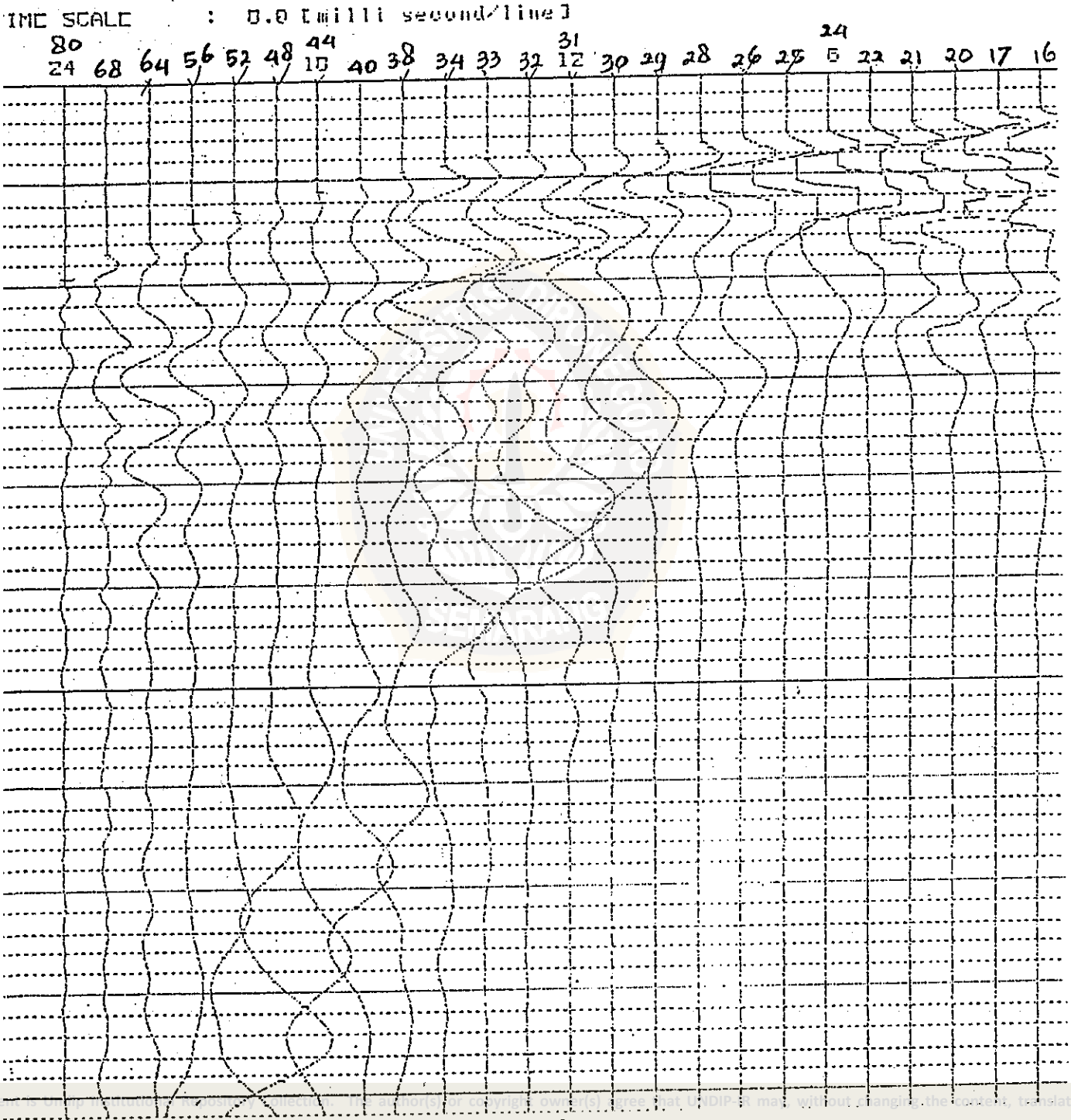
SP 1031 WZ

CHANNEL NO.	1	2	3	4	5	6	7	8	9	10	11	12
No. of STACKS	1	1	1	1	1	1	1	1	1	1	1	1
GAIN [db]	0	0	0	0	0	6	6	12	12	12	18	18

CHANNEL NO.	13	14	15	16	17	18	19	20	21	22	23	24
No. of STACKS	1	1	1	1	1	1	1	1	1	1	1	1
GAIN [db]	18	24	24	24	30	30	30	36	36	36	42	42

TRACE SIZE : Compression rate AUTO

TIME SCALE : 8.0 [milli second/line]



ANNEL NO. :24 [channel]
RD LENGTH :1024 [word]
MPLE TIME :0.400 [milli second]
IGGER TIME : 20.000 [milli second]
W CUT FILTER : 10 [HZ]
GH CUT FILTER: 140 [HZ]
ANNEL NO. : 1 2 3 4 5 6 7 8 9 10 11 12
. of STACKS : 1 1 1 1 1 1 1 1 1 1 1 1
IN [db]: 6 18 24 30 30 36 36 36 42 42 42 48

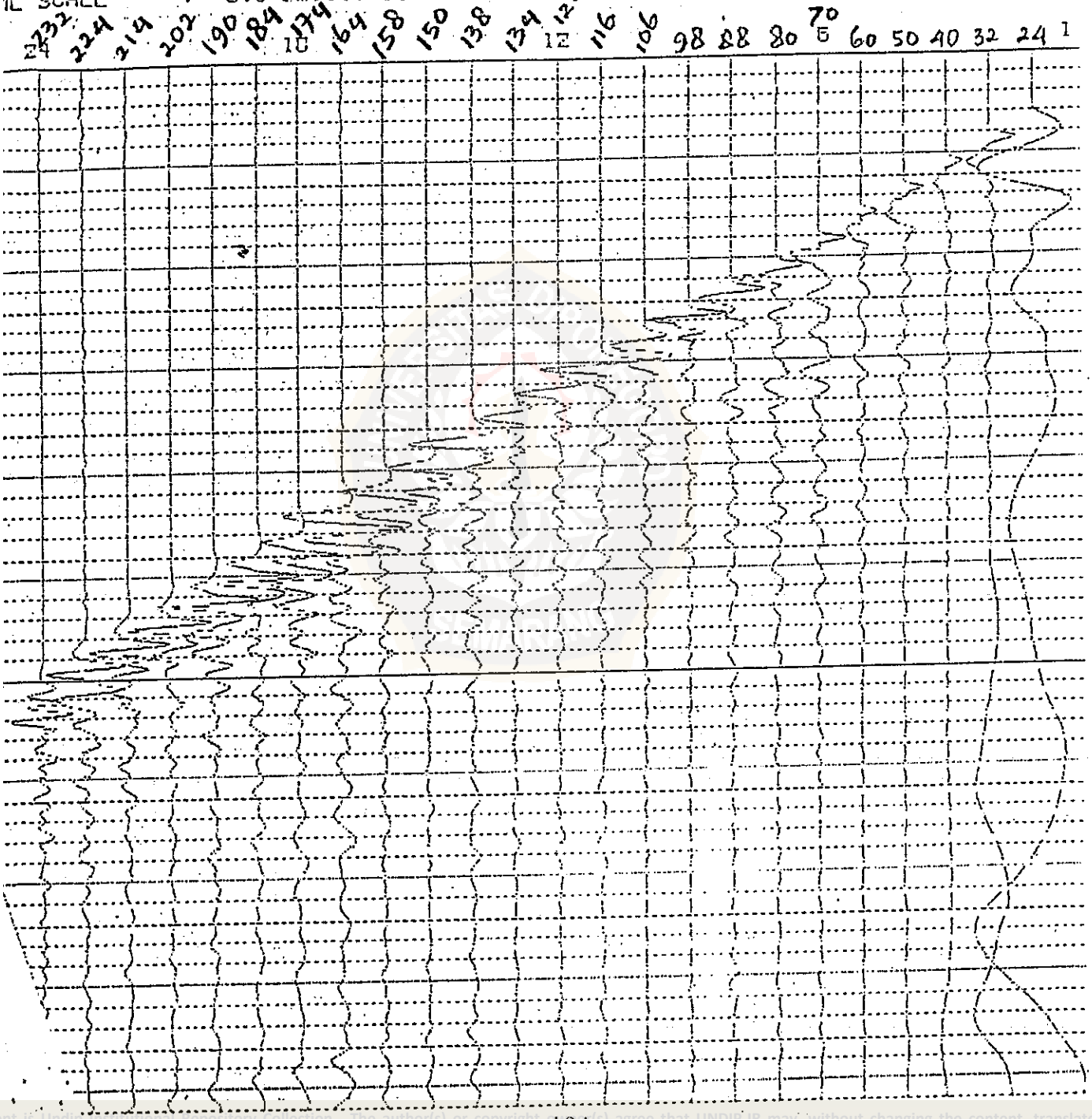
ANNEL NO. : 13 14 15 16 17 18 19 20 21 22 23 24
. of STACKS : 1 1 1 1 1 1 1 1 1 1 1 1
IN [db]: 48 48 54 54 54 60 60 60 60 60 66 66

ACE SIZE : Compression rate AUTO

IC SCALE : 3.0 [milli second/line]

Line 93WNJ-07

SP 1031 REF



SP 1044 REF

```
CHANNEL NO.      :24 [Channel]
WORD LENGTH      :1024 [word]
SAMPLE TIME      :0.400 [milli second]
TRIGGER TIME     :  20.000 [milli second]
LOW CUT FILTER   :  10 [Hz]
HIGH CUT FILTER  :140 [Hz]
CHANNEL NO.      :  1  2  3  4  5  6  7  8  9 10 11 12
No. of STACKS    :  1  1  1  1  1  1  1  1  1  1  1  1
GAIN      [db]   : 66 66 60 60 60 60 60 54 54 54 40 40

CHANNEL NO.      : 13 14 15 16 17 18 19 20 21 22 23 24
No. of STACKS    :  1  1  1  1  1  1  1  1  1  1  1  1
GAIN      [db]   : 40 42 42 42 36 36 36 30 30 24 18  6

TRACE SIZE       : Compression rate AUTO

TIME SCALE       :  0.0 [milli second/line]
```

24 34 44 54 64 72 82 10 88 96 106 112 120 128 12 138 154 164 168 174 184 6 192 306 212 220 230

Line 93WNJ-07

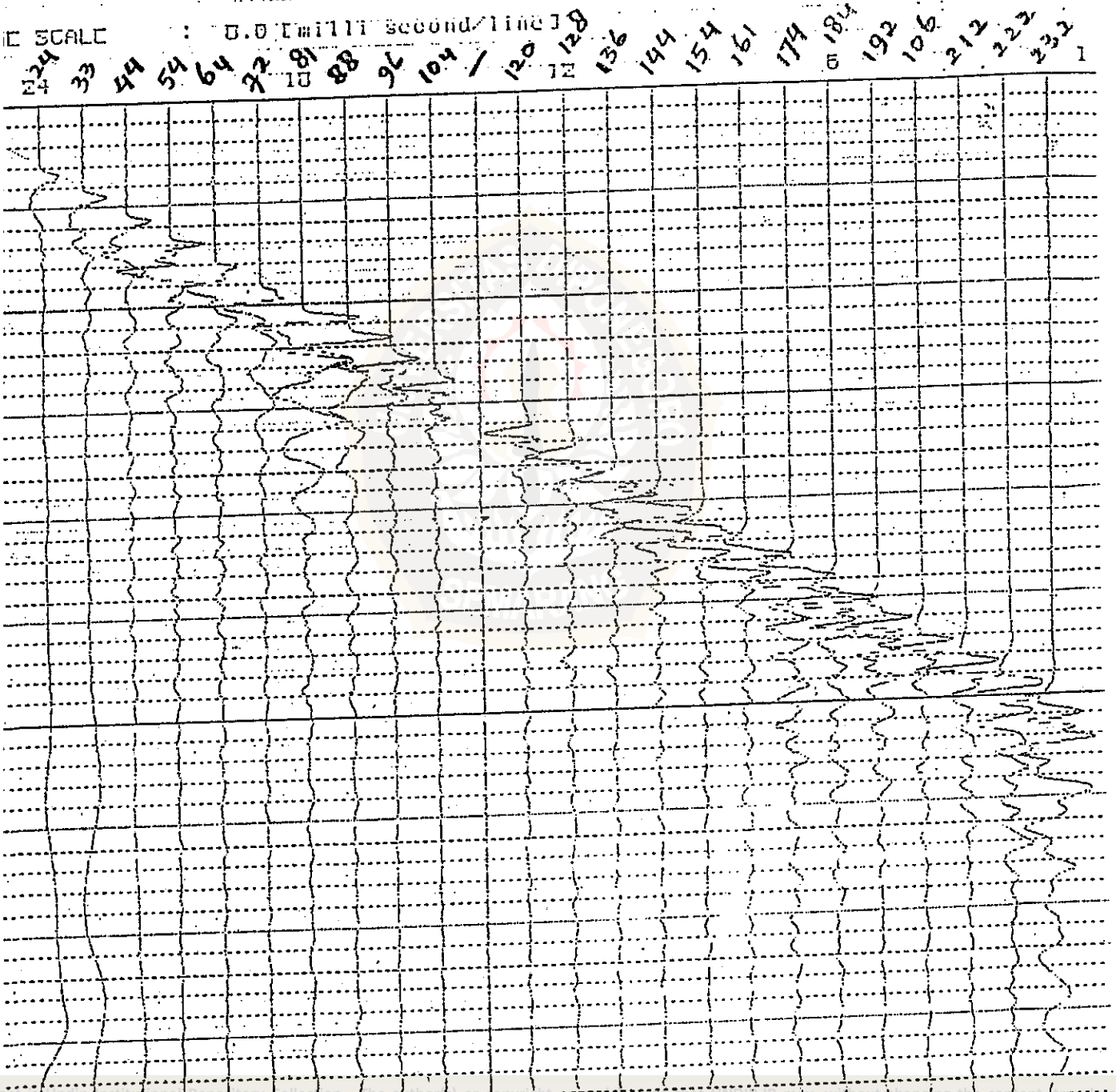
SP 1056 REF

```
< DATA          :ID NO. 165
E,TIME          :08 10 93 ;11:46:45 AM
NNEL NO.        :24 [channel]
D LENGTH        :1024 [word]
PLE TIME        :0.400 [milli second]
GGER TIME       :   20.000 [milli second]
 CUT FILTER     :  10 [Hz]
H CUT FILTER    :140 [Hz]
NNEL NO.        :  1  2  3  4  5  6  7  8  9 10 11 12
 of STACKS      :  1  1  1  1  1  1  1  1  1  1  1  1
N        [db]   : 66 66 60 60 60 60 60 54 54 54 48 48

NNEL NO.        : 13 14 15 16 17 18 19 20 21 22 23 24
 of STACKS      :  1  1  1  1  1  1  1  1  1  1  1  1
N        [db]   : 48 42 42 42 36 36 36 30 30 24 18  6

CE SIZE         : Compression rate AUTO

IC SCALE        :  0.0 [milli second/line]
```



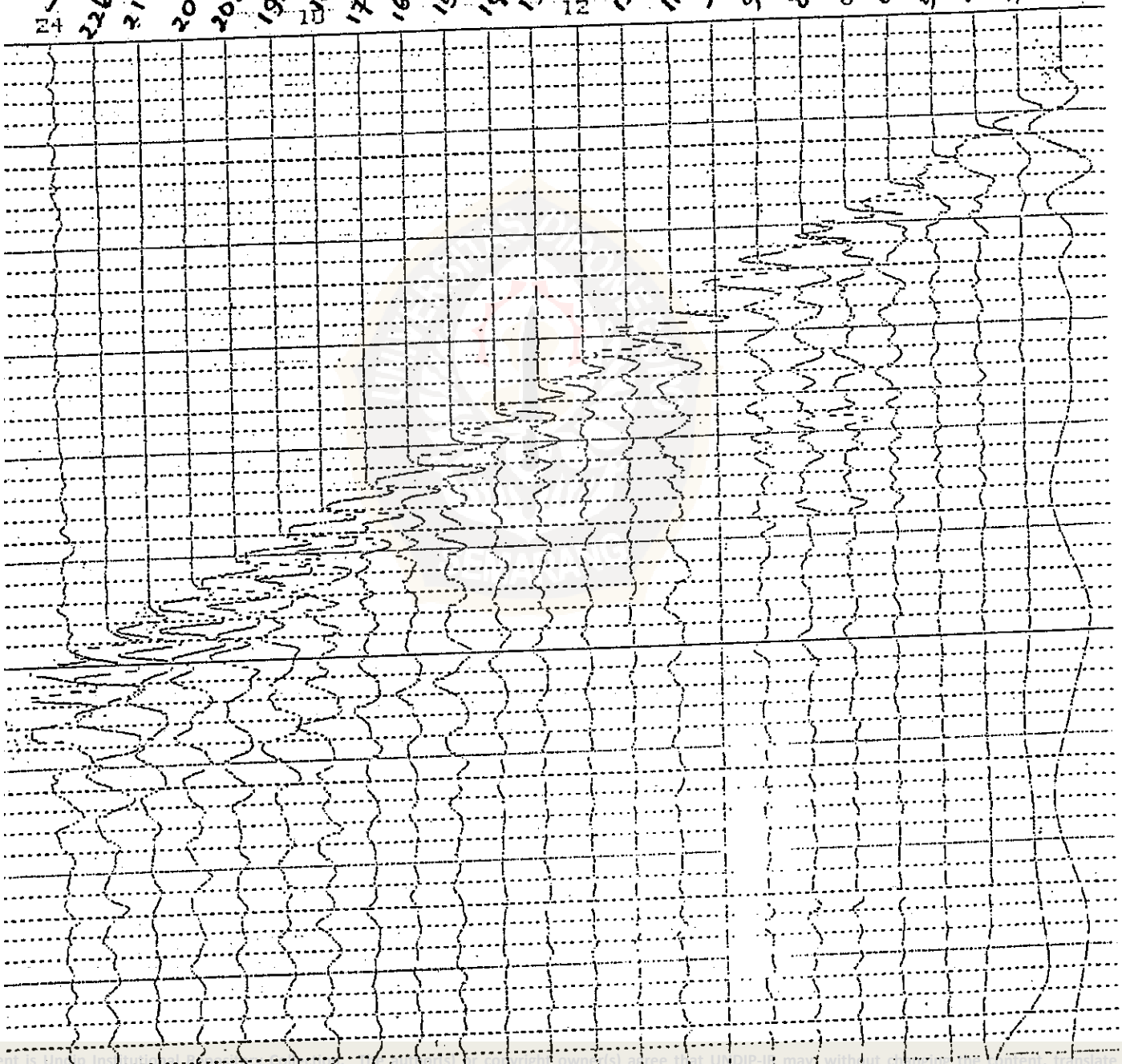
Line 93WNJ-07
SP 1069 REF

```
SK DATA          :ID NO. 164
TE,TIME          :00 10 93 ,11:21:25 AM
ANNEL NO.        :24 [channel]
RD LENGTH        :1024 [word]
MPLE TIME        :0.400 [milli second]
IGGER TIME       :  20.000 [milli second]
W CUT FILTER     :  10 [Hz]
GH CUT FILTER    :140 [Hz]
ANNEL NO.        :  1  2  3  4  5  6  7  8  9 10 11 12
. OF STACKS      :  1  1  1  1  1  1  1  1  1  1  1  1
IN        [db]:  6 10 24 30 30 36 36 36 42 42 42 40

ANNEL NO.        : 13 14 15 16 17 18 19 20 21 22 23 24
. OF STACKS      :  1  1  1  1  1  1  1  1  1  1  1  1
IN        [db]: 40 40 54 54 54 60 60 60 60 60 66 66

ACE SIZE         : Compression rate AUTO

ME SCALE         :  8.0 [milli second/line]
```



Line 93WNJ-07

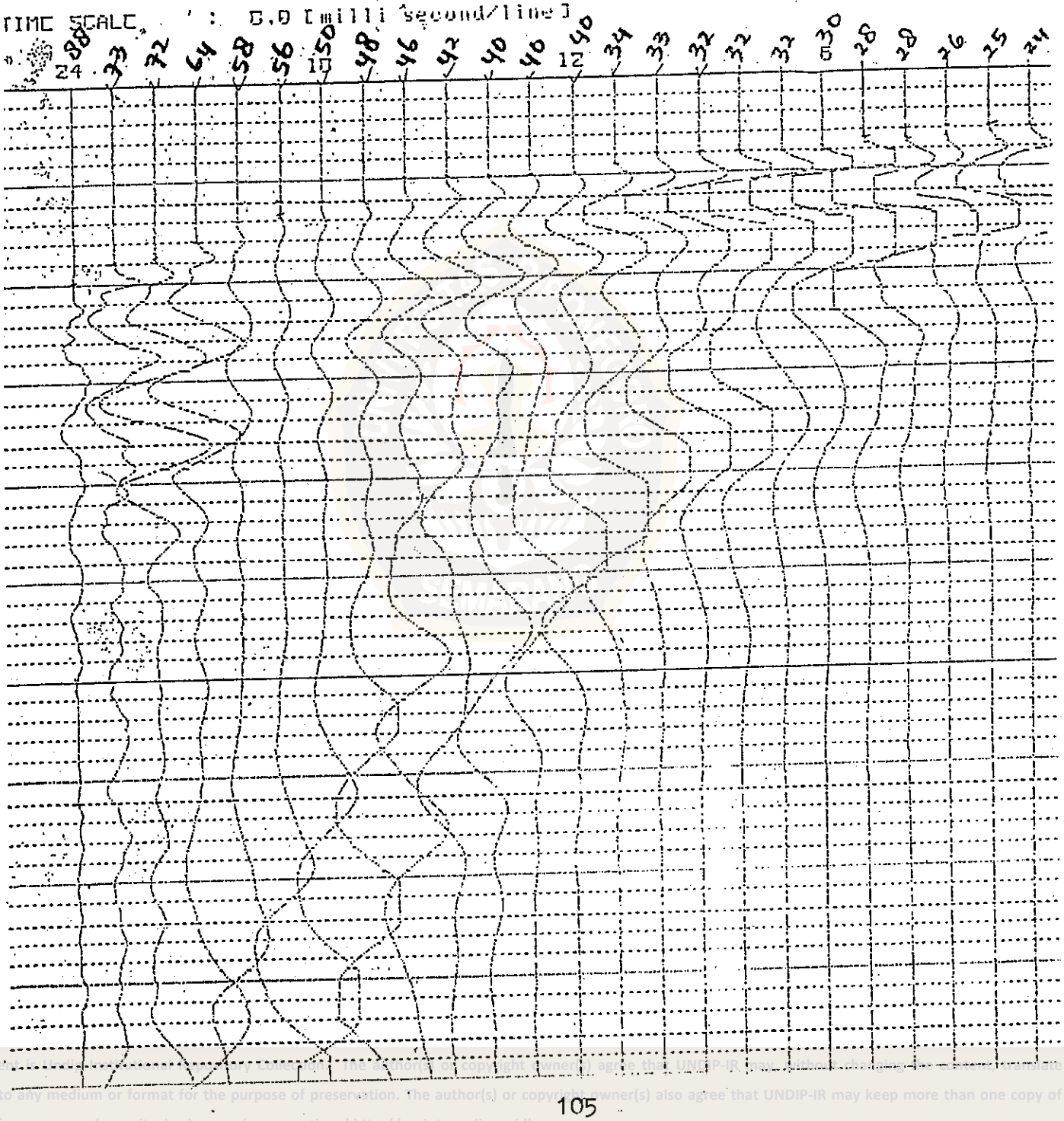
SP 1081 WZ

```
DISK DATA          :ID NO. 166
DATE,TIME          :00 10 93 ,01:47:29 PM
CHANNEL NO.        :24 [channel]
WORD LENGTH        :1024 [word]
SAMPLE TIME        :0.400 [milli second]
TRIGGER TIME       :  20.000 [milli second]
LOW CUT FILTER     :  10 [Hz]
HIGH CUT FILTER    : 140 [Hz]
CHANNEL NO.        :  1  2  3  4  5  6  7  8  9 10 11 12
No. of STACKS      :  1  1  1  1  1  1  1  1  1  1  1  1
GAIN          [db]:  0  0  0  6 12 12 12 18 18 18 24 24

CHANNEL NO.        : 13 14 15 16 17 18 19 20 21 22 23 24
No. of STACKS      :  1  1  1  1  1  1  1  1  1  1  1  1
GAIN          [db]: 24 30 30 30 36 36 36 42 42 42 48 48

TRACE SIZE         : Compression rate AUTO

TIME SCALE         :  5.0 [milli second/line]
```



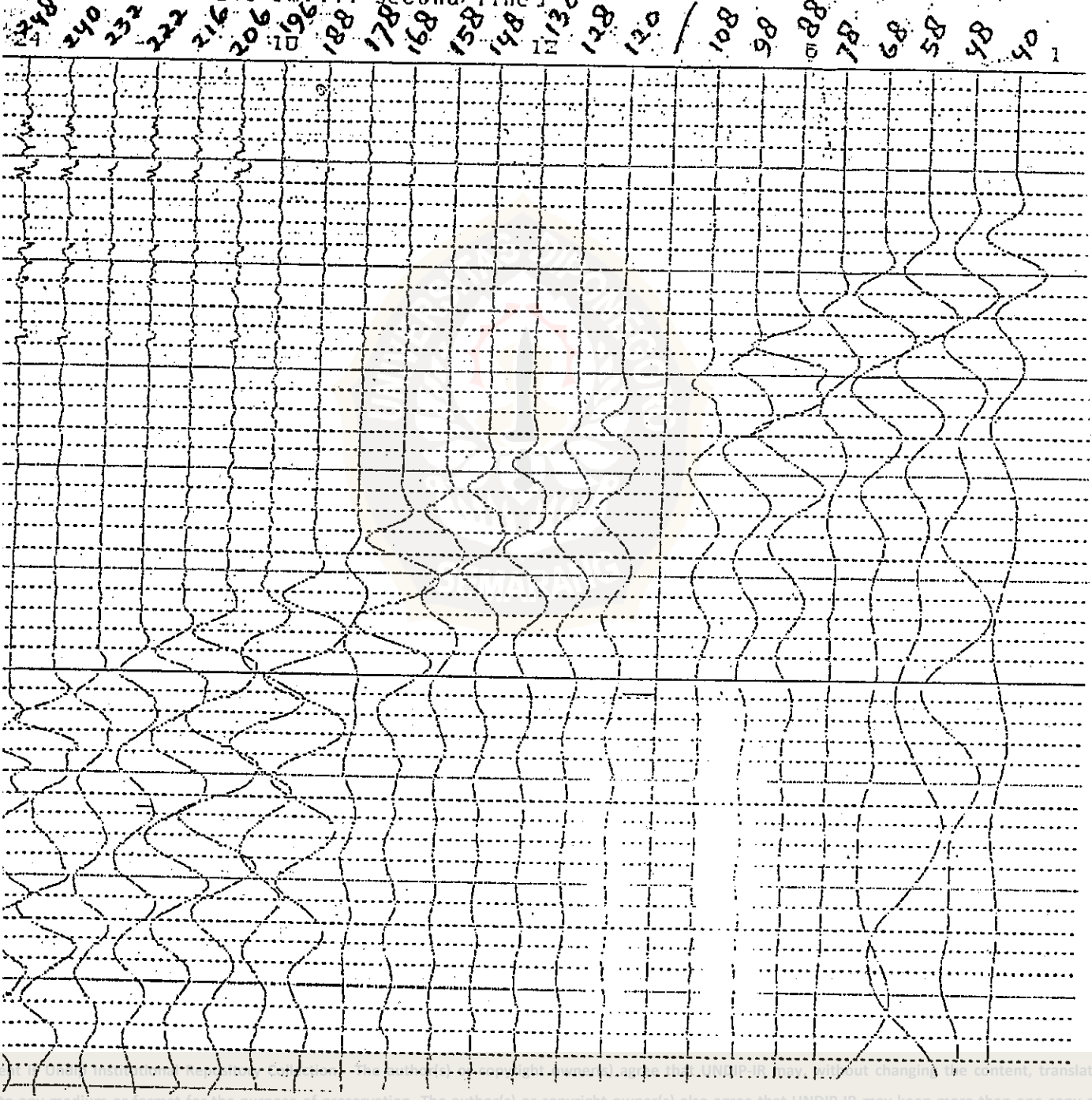
Line 95WNJ-07
SP 1081 REF

```
SK DATA          :ID NO. 167
TE,TIME          :08 10 95 ,02:30:59 PM
ANNEL NO.        :24 [Channel]
TA LENGTH        :1024 [word]
MPLE TIME        :0.400 [milli second]
IGGER TIME       :  20.000 [milli second]
W CUT FILTER     :  10 [Hz]
GH CUT FILTER    : 140 [Hz]
ANNEL NO.        :  1  2  3  4  5  6  7  8  9 10 11 12
 OF STACKS       :  1  1  1  1  1  1  1  1  1  1  1  1
N          [db]:  6 10 24 30 30 36 36 36 42 42 42 48

ANNEL NO.        : 13 14 15 16 17 18 19 20 21 22 23 24
 OF STACKS       :  1  1  1  1  1  1  1  1  1  1  1  1
N          [db]: 48 48 54 54 54 60 60 60 60 60 66 66

DE SIZE          : Compression rate AUTO

E SCALE          :  0.0 [milli second/line]
```



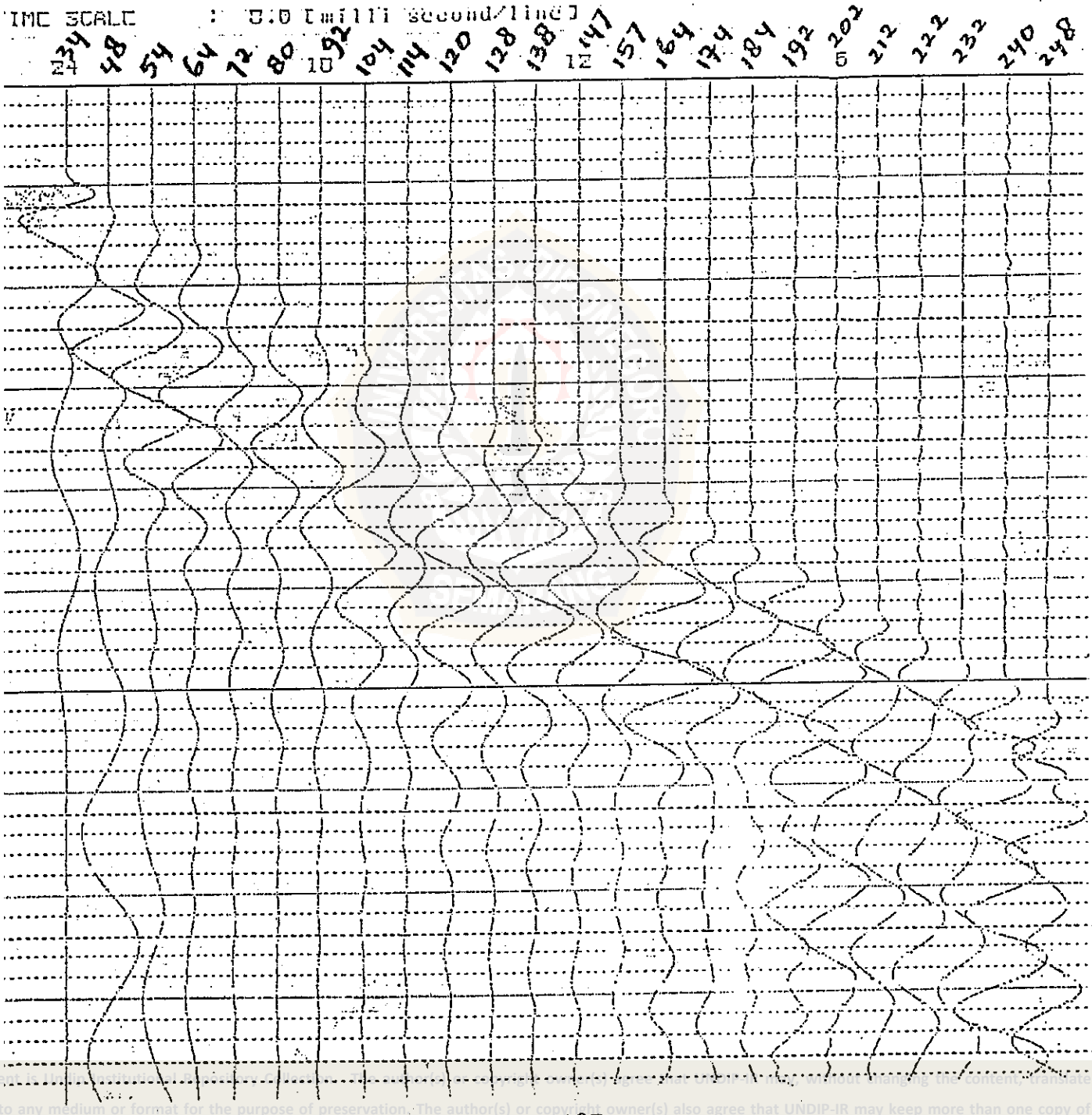
Line 93WNJ-07
SP 1094 REF

```
ISK DATA        :ID NO. 160
)ATE,TIME       :00 10 93 ,02:51:32 PM
)HANNEL NO.     :24 [channel]
)ORD LENGTH     :1024 [word]
)AMPLE TIME     :0.400 [milli second]
'RIGGER TIME    :  20.000 [milli second]
.OW CUT FILTER  :  10 [Hz]
)IGH CUT FILTER:  140 [Hz]
)HANNEL NO.     :  1  2  3  4  5  6  7  8  9 10 11 12
)o. of STACKS   :  1  1  1  1  1  1  1  1  1  1  1  1
)AIN       [db]: 66 66 60 60 60 60 60 54 54 54 48 48

)HANNEL NO.     : 13 14 15 16 17 18 19 20 21 22 23 24
)o. of STACKS   :  1  1  1  1  1  1  1  1  1  1  1  1
)AIN       [db]: 48 42 42 42 36 36 36 30 30 24 18  6

'RACE SIZE      : Compression rate AUTO

'IME SCALE      :  8.0 [milli second/line]
```



LAMPIRAN E

T - X CURVE UNTUK LINE 93WNJ-07